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# PAPERS

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## NUMBER 1

ARCHAEOLOGY OF NORTHWESTERN VENEZUELA
By Alfred Kidder, II
1944

## NUMBER 2

THE BORUCA OF COSTA RICA
By Doris Z. Stone
1949

# ARCHAEOLOGY OF NORTHWESTERN VENEZUELA

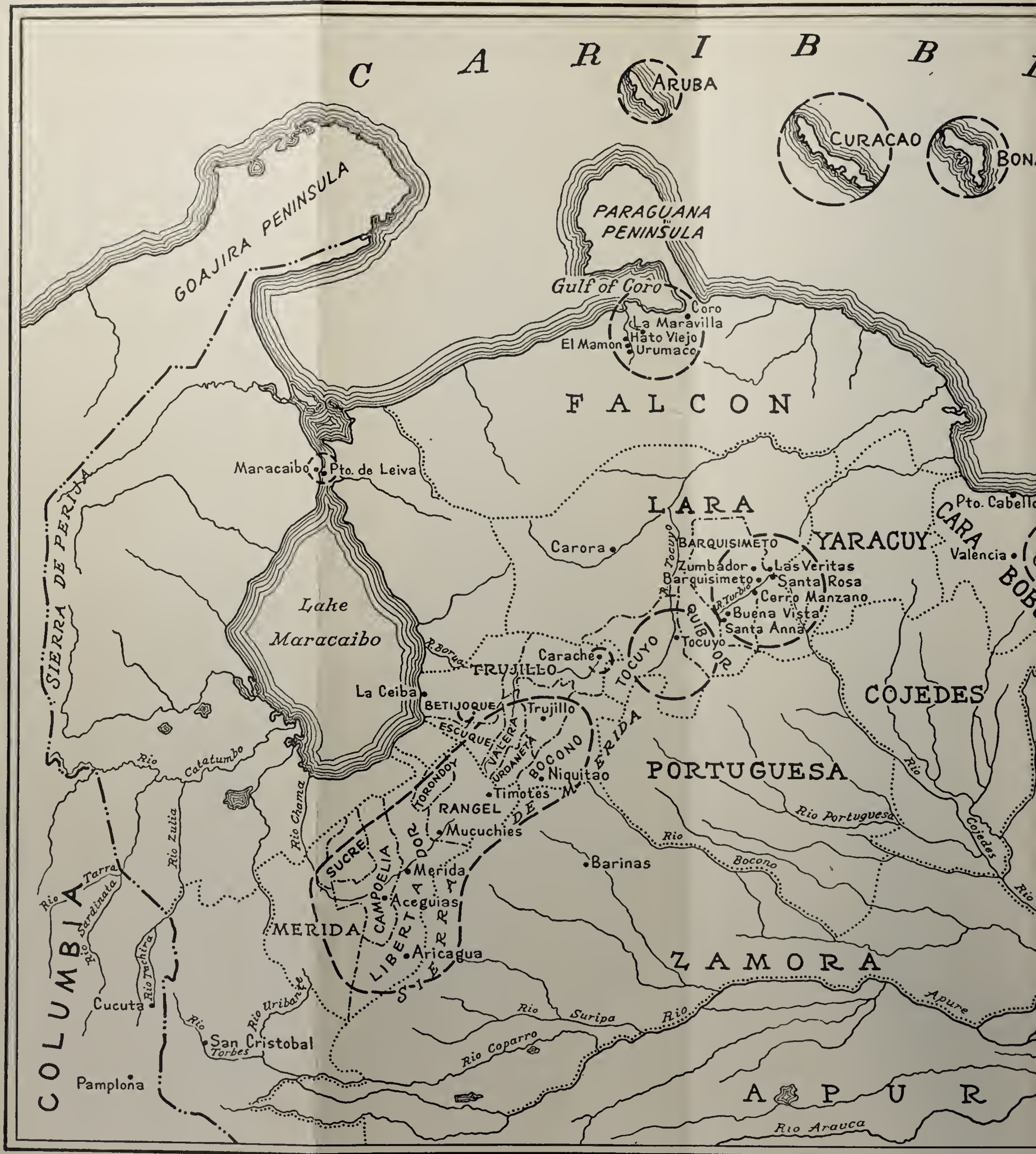
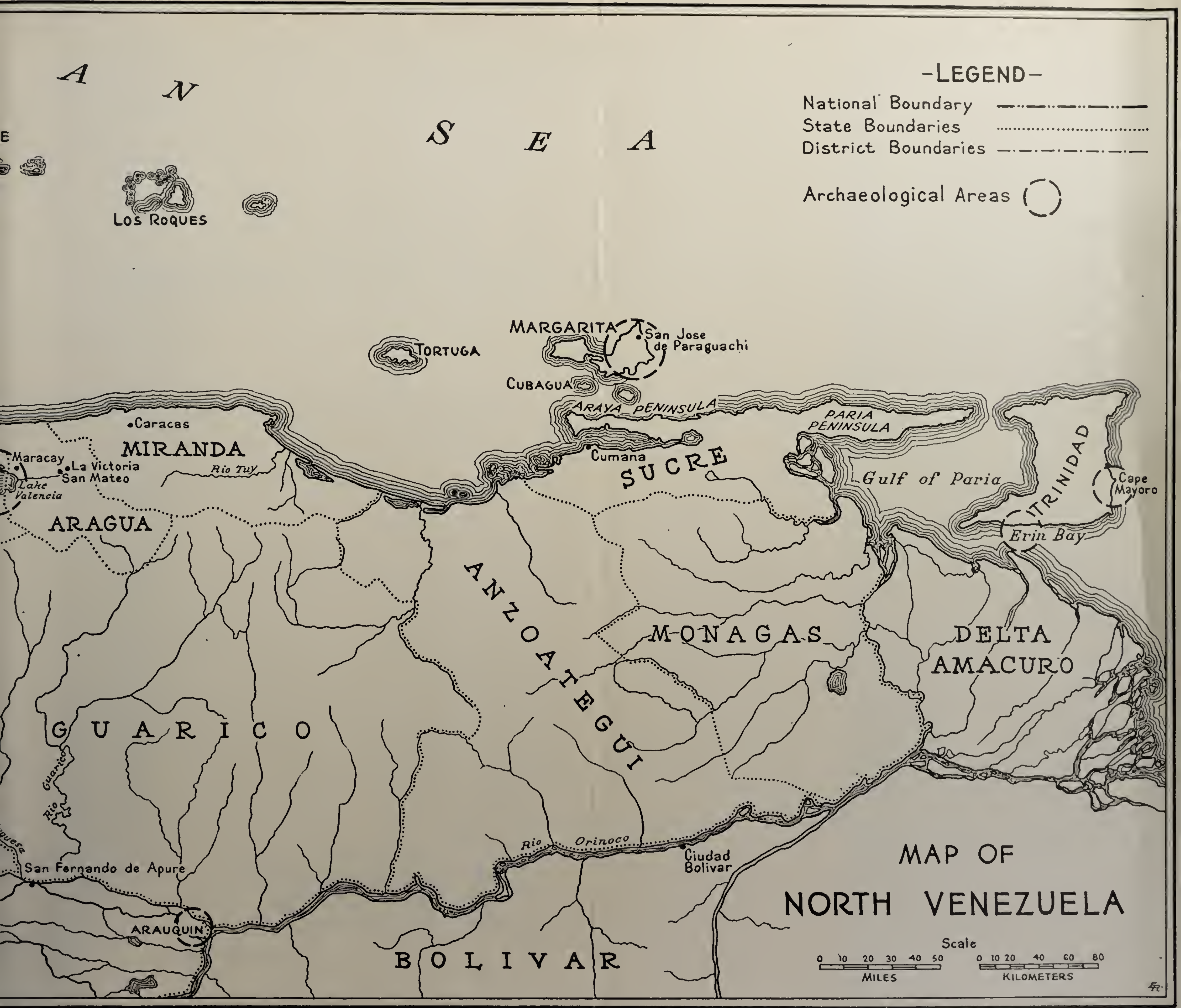


Fig. 1. Map of North Venezuela


MAP OF NORTH VENEZUELA

PAPERS
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# ARCHAEOLOGY OF NORTHWESTERN VENEZUELA

BY

ALFRED KIDDER, II

CAMBRIDGE, MASSACHUSETTS, U.S.A.
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1944

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# ARCHAEOLOGY OF NORTHWESTERN VENEZUELA

# INTRODUCTION

VENEZUELAN archaeology has never aroused the interest warranted by the geographical position of the Republic and the nature of the remains. This paper is an attempt, first and foremost, to describe these remains, that they may serve as aids to investigators in other parts of the country, as yet unexplored archaeologically, and to those working in contiguous fields. Comparative material from other areas has been used to derive certain conclusions in regard to Venezuelan cultures in general. If these conclusions fail, as many of them certainly will, to give a full picture of pre-Columbian cultural affinities in the region, at any rate I can derive a certain satisfaction from the fact that the raw data here supplied may be of assistance to others who may use them in more successful historical reconstructions.

Aside from the analysis and description of material from excavations and collections, there have been included short sketches of previous archaeological work and as much purely geographical description as has seemed necessary to furnish a proper background for a reader presumably unacquainted with northern South America.

A section designed to furnish an historical and ethnological background has been included. This is obviously of the greatest importance, but I must acknowledge that in many ways it is perhaps the most unsatisfactory section. This is so because the accounts of the early German and Spanish *Conquistadores* supply relatively little information concerning the aborigines who inhabited the regions where excavations were conducted. Added to this is the fact that I am not prepared to evaluate linguistic evidence presented in the early and contemporary literature, much of which is of a contradictory and confusing nature. Certain facts in this respect are clear, however, and provide the general, if not the particular, background for purely archaeological studies.

This report is far from final; it will have succeeded if some of the problems involved in the archaeology of northern South America are outlined from the viewpoint of the student in Venezuela. Venezuela was probably not a center of major cultural origins — most of the evidence points to the reception of ideas from other areas. But, like Colombia, Venezuela is of great importance both as a passageway and a center of local developments of considerable significance in the pre-history of northern South America, and particularly the Antilles. Venezuelan data should increase our knowledge of the diffusion of possible Central American traits, their influence on the southern continent and their meeting with locally developed features moving to the north and west.

As the result of Dr. Rafael Requena's enthusiasm for archaeological research, I was fortunate enough to be able to go to Venezuela in 1933 to excavate in the Valley of Aragua. At the same time Dr. E. W. Berry, of Johns Hopkins University, visited the same area to conduct paleontological studies in connection with the supposedly great antiquity of the finds there. The visiting North Americans were given every comfort and were provided with transportation and labor by the Venezuelan Government.

Very little traveling was done in the 1933 season; after an inspection of various sites in the Valley of Aragua, the following six weeks were spent in excavation at the Los Tamarindos site on the Peninsula of La Cabrera.

The 1934 expedition was a direct outgrowth of the previous year's work. It was felt that further work would be helpful in evaluating the material from the originally excavated site, and, accordingly, the following plan was evolved, to be carried out under the direction of the Division of Anthropology of Harvard University and financed by a Rockefeller Grant for research.

(1) In the vicinity of Caracas an attempt was to be made to ascertain the nature of the early cultures in the Valley of Caracas, situated some hundred kilometers east of Lake Valencia and quite definitely inhabited at the time of the Conquest by Indians of Carib speech.

(2) This was to be followed by a trip to the west, passing through the Valley of Aragua

and into the Andean region, where remains of a culture quite distinct from those of the Aragua region were in existence.

(3) After this reconnaissance survey, work was to be continued near Lake Valencia.

Caracas and its environs were a disappointment archaeologically; no sites suitable for excavation could be found, nor was there any local knowledge of finds having been made with the exception of occasional surface pieces.

The western survey was then undertaken. Barquisimeto, in the State of Lara, was the first stop for any length of time. In the Barquisimeto region local collections were noted and several sites were examined. Very little material could be found in Lara. Although there were a number of accounts of Indians having lived there, their remains appeared to be sparse, and sites difficult to locate.

After leaving Barquisimeto, better conditions were encountered at Carache in eastern Trujillo, where a considerable amount of material was secured. This was of an entirely different sort than that from either the Valley of Aragua or the Barquisimeto region.

Western Trujillo and Merida were archaeologically disappointing. The well known Andean cave sites, in the vicinity of Timotes, Niquitao and Merida had been, it was said, completely looted, and exploration for undisturbed caves in the *paramo* zone, where they exist, was impossible to undertake. This was on account of the great expense of mule hire, the lack of a proper camping outfit, the uncertainty of results and the time required. These caves, according to local information, are usually hidden, their mouths covered with slabs; their discovery is a matter of chance in an area as large as the Venezuelan Andes. Collections of material from these places were not difficult to find, however, and many of them were noted and photographed.

My wife and I passed through Valera, up the valley of the Rio Motatan, through Timotes, over the Paramo Mucuchies and down the valley of the Rio Chama to Merida. Upon our return to Caracas, I studied the Andean collection of Dr. Mario Briceño-Iragorry, and plans were made to proceed with the previous year's work in the Valley of Aragua. Considerable time was lost in securing permission to work at La Cabrera; in the interval a little excavation was done at San Mateo, twenty-five kilometers east of Maracay, thanks to the kindness of the Director of the Gran Ferrocaril Venezuela. This site produced very little, however, and only material of a sort with which I was already familiar; namely, the remains from the humus deposits nearer Lake Valencia. A site survey was then undertaken; remains were noted on all sides of the lake. When permission was finally obtained, a brief dig was carried out at the Los Tamarindos site, where I had worked in the previous year. This was concentrated in the lower levels, in order to enlarge the collection from these strata. The material is now in the Peabody Museum of Harvard University.

No archaeologist can succeed in a foreign country without the help of a number of people both at home and in the field. I have been fortunate in receiving the aid and co-operation of many friends both in the United States and in Venezuela. To Dr. Rafael Requena I owe not only the entire first season's work, but also the warmest thanks for his personal kindness and interest. Dr. Requena's enthusiasm has led me and many others to an interest in Venezuelan archaeology. Both my wife and I owe one of our greatest debts to Mrs. Jordan Herbert Stabler, and to the late Mr. Stabler for their untiring efforts in behalf of the 1934 expedition and their unfailing interest in the project. I also wish to thank Mr. James Amory Sullivan for his kind assistance in the illustration of Carache pottery. Both the American Museum of Natural History and the Museum of the American Indian, Heye Foundation, have very kindly allowed me to use a number of specimens for illustration, for which I am most grateful. Finally, I should like to thank Miss Cordelia Galt and Mary B. Kidder, my wife, for their long hours of hard work on manuscript, proofs and illustrations.

# GEOGRAPHICAL BACKGROUND

THE Republic of Venezuela (fig. 1) lies approximately between 60° and 73°30′ west longitude and 1°40′ and 12°26′ north latitude. It is bound on the north by the Caribbean Sea, on the east by British Guiana and Brazil, on the south by Brazil and on the west by Colombia. As in so many other countries in the tropics, environment is conditioned more by altitude than by latitude; Venezuela displays: hot, dry coasts, low lying jungles, pleasant plateau areas, cold uplands, and permanent snow fields. Most of the country is drained ultimately into the Caribbean, with Lake Valencia forming the basin of a small but important interior drainage. The high land, dividing the Orinoco and Maracaibo watersheds, is an eastern extension of the eastern Colombian Andes, which itself divides into two chains. The westernmost, extending due north in Colombia, ends in the Goajiro Peninsula; the ridge of this range, the Sierra de Perija, forms the boundary between Venezuela and Colombia. The eastern spur, the Sierra Nevada de Merida, extends into Venezuela and maintains high elevations as far as the State of Lara. Its highest peak, in Merida, is slightly over 5000 meters above sea level. This range is not, however, a continuous highland extension of the Colombian Andes. It is cut off from them by the upper valleys of the Apure system, the Guinimari and the Torbes, on the south, and by the upper Zulia-Catatumbo drainage on the north. Here the La Grita, the Lobaterita, the Tachira and the Pamplonita are separated from the Orinoco watershed only by low hills. The height of the divide in this region is scarcely 1000 meters; the Valley of Cucuta lies well below this altitude. This easy pass is of considerable importance, since it affords a means of passage from the *llanos* of the Apure to the forests of the Maracaibo side, or *vice versa.*

The area between the foothills of the Sierra de Merida and Lake Maracaibo is low and covered with a heavy jungle, which stretches up the west side of the lake, covering the slopes of the Sierra de Perija, giving way to the dry coast land only in the Goajiro Peninsula and on the northern shores of the lake. Most of this area is little known; the Perija region is the last refuge of the notoriously unfriendly Motilon Indians, and little anthropological exploration has been done on the Venezuelan slopes of this range.

The Goajiro Peninsula, largely in Colombia, is dry and open, with low hills representing the northern extremity of the Perija. This dry coastal plain extends along the coast eastward from Maracaibo and includes the Peninsula of Paraguana; it is very wide throughout most of the State of Falcon.

The main Cordillera extends into the western part of the State of Lara; here it breaks off into plateau country and is cut by streams flowing into the Orinoco. A low range separates the State of Lara and the State of Falcon, but most of the Falcon and northern Lara area is very dry. The mountains continue sporadically along the northern coast, where they rise over 2000 meters between Caracas and the coast. A second, lower range, south of the coast range, forms the Valley of Aragua, with its interior drainage to Lake Valencia, and the Valley of Caracas. The coast range rises directly from the sea in many places, as at La Guaira, but east of Caracas it becomes lower, until, in the State of Anzoategui, the coastal plain extends far inland. The coast range is last seen as low hills in the State of Sucre, along the Araya and Paria Peninsulas.

The only other mountains of importance are the Guiana group, the Pacaraima, Parima and Imeri ranges, separating Venezuela from Brazil and marking the beginning of the Amazon drainage. Mount Roraima, in British Guiana, with an elevation of 2656 meters is the highest peak in this region. West of the Sierra Imeri is the low lying region where the Orinoco and Amazon systems are connected by the Casiquiare canal, joining the Orinoco and the upper reaches of the Rio Negro.

The remainder of the country is drained by the Orinoco. Streams rise all along the main Cordillera and eastward on the southern slopes of the lower mountains, south of Lake Valencia, and throughout most of the States of Guarico, Anzoategui and Monagas. The large tributaries from the west, the Apure, Arauca and Meta, rise in the Andes, the Arauca and Meta in Colombia. These streams, with their hundreds of lesser tributaries, drain the great flat plains or *llanos*, covered with high grass and interspersed with clumps of palms and with occasional more extensive wooded areas. For the most part these plains are open, however, and the same condition prevails in the east, north of the Orinoco itself, where the country is chiefly savanna rather than heavily wooded. South of the Orinoco, in the State of Bolivar, in the Caura and Caroni drainage and in Amazonas Territory, there are still extensive savannas, but a great deal of heavy forest as well.

Four altitudinal zones have been described.[1] A zonal division of this sort, in connection with a map, is probably the best means of visualizing climatic and floral conditions.

The first zone, the *tierra caliente* (tropical) extends from sea level to 800 meters. The greater part of Venezuela lies in this zone, and the climate depends largely on water supply. It includes the low lands of the States of Zulia, Falcon, Yaracuy, Lara, Carabobo, Portugesa, Zamora, Apure, Guarico, Bolivar, Sucre, Monagas, Anzoategui and Miranda, the coast of the Federal District, the Territories of the Orinoco delta (Delta Amacuro) and Amazonas.

On the *llanos* tropical vegetation is limited to the banks of streams and occasional clumps of trees. Heavy rainfall produces thick tropical rain forest, as in the Delta region, the lowlands of the upper Orinoco area, the lower Maracaibo Basin and the Yaracuy Valley. Deciduous forests once covered the Aragua Valley area and much of the Maracaibo Basin. In the other and larger part of this zone, on the *llanos*, in most of Lara and Falcon, a large part of the Caribbean litoral and on the Goajiro Peninsula, the rainfall is strongly seasonal, producing a xerophytic vegetation of thorny brush and cacti. Probably Falcon and Lara are the dryest areas; the *llanos* are practically inundated from May to December, but during the rest of the year, there is seldom any rain whatever.

The second zone, the *tierra templada* (subtropical), lies between 800 and 2000 meters. The slopes and valleys of the Andes, the coast range and the Guiana highlands fall within this region. Much of the area is covered with deciduous forest, as is the coast range north of the Valley of Aragua, with rain forests in the Guiana highlands. The lower limits are not always free from the cacti and other thorny growths of the dry areas. If this altitude zone is well watered it may be under heavy vegetation; serious erosion may take place if deforestation has occurred.

The *tierra fria*, or cold zone of high altitude tropical America, is divided by Jahn into two parts, the "sub-alpine" or "cold," his third, and the *paramo* or "alpine," his fourth.

The "sub-alpine" zone lies between 2000 and 3000 meters above sea level. In its lower limits vegetation is of the tropical temperate type, as in the lower zone, and as the altitude increases, large trees become more scarce until they cease to grow entirely between 2800 and 3000 meters, where wild flowers grow profusely. This zone is limited to the Andes, the Perija and the highest peaks of the coast range.

The "alpine" or *paramo* zone extends above 3000 meters to the snow line, at about 4600 to 4700 meters. The word *paramo* is used to designate a high, cold place; the high slopes and shoulders of the Cordillera are so termed. This zone is limited entirely to the Andes of Merida, Trujillo and Tachira. Jahn has estimated that there are 2600 square kilometers of *paramo* in Merida, 900 in Trujillo and 600 in Tachira. Practically the only vegetation is the *frailejon*, a giant dandelion (*Espeletia*), of which there are a number of species. The upper limit of economically significant plant life is fixed by the snow line, falling at about 4700 meters.

Agriculturally, the tropical zone is most productive. From the point of view of the archaeologist the most important crops here are corn, manioc, cotton, cacao and tobacco. Today plantations of sugar cane and bananas are important. The sub-tropical areas also produce corn, sugar cane, bananas and most of the coffee. The sub-alpine and alpine zones today produce wheat, potatoes and many common vegetables.

Aboriginal Venezuelans used or cultivated a number of plants. Maize was certainly in use (p. 16), although the metate complex apparently did not reach Venezuela in any strength. Today maize is usually pounded in a wooden mortar by the country people. It is probable that this method was used by the Indians.

---

[1] Chardon, 1933; Jahn, 1934.

Beans of some sort were apparently cultivated (p. 16). Manioc, probably both bitter (*Manihot esculenta*) and sweet (*Manihot appi*), must have been important (p. 12); both are in use today.

Jahn, referring to the Andean people, states[2] that the yam (*Dioscorea alata*) was cultivated. Pittier, however, says [3] that no cultivated species of yam is indigenous to the New World. References to yams in historical accounts (p. 12) may have been to the true sweet potato. Jahn's list also includes the calabash (*Cucurbita pepo*). Pittier adds [4] that sixteen species of *Cucurbita* are present in Venezuela.

Cacao is probably indigenous,[5] and there is literary if not archaeological evidence of its use (p. 17).

Arracacha (*Arracacia zanthorihiza*) is also included by Jahn. It is known to be an indigenous plant.[6]

Very important are the potato-like tubers and the true potato. *Ullucus tuberosus* and *Oxalis tuberosa* are both said by Jahn to have been utilized; *Oxalis* is represented by sixteen Venezulean species.[7]

Of the true potato (*Solanum tuberosum*), Pittier [8] says that there are eighty wild species in Venezuela. They are all very small, and Jahn feels that they were cultivated to increase their size.

There were undoubtedly many other food plants in use by the Indians, probably none of first importance. Among these Jahn mentions the common *frailejon* (*Espeletin* sp.) from which a pickle-like preserve is still made in the Andes.

Another plant useful to the Indians was cotton (*Gossypium*) of which there are many species in Venezuela,[9] and for the use of which there is historical evidence (p. 16).

Jahn also lists *Bixa orellana*, from which red paint was extracted, and *Myrica arguta*, which produces a wax. Pittier places both of these as native species.[10]

Tobacco was undoubtedly in use (p. 16); it was probably smoked in the elbow pipes found in the lower levels at Los Tamarindos. Pittier believes that coca (*Erythroxylon coca*) may have reached Venezuela in pre-Columbian times; he states [11] that there are now sixteen species in the area. There is historical evidence for the use of coca or a similarly chewed leaf (p. 16).

The plants named above were all almost undoubtedly in use, although archaeological proof is lacking. Careful work in Andean caves and tombs would almost certainly produce further evidence in regard to the nature of food plants. There is historical evidence that many of the aborigines were agriculturalists; we must infer the same in regard to other groups when archaeology demonstrates that they lead sedentary lives.

Off the coast there are only a few islands territorially Venezuelan, the only important one of which is the Island of Margarita, north of the Araya Peninsula. Geographically, however, the Dutch possessions of Aruba, Curacao and Bonaire and the British possession of Trinidad form parts of Venezuela.

Curacao is less than 70 kilometers from the coast of Falcon, Aruba only slightly more than 30 from the Paraguana Peninsula. These islands are low and dry, very much the same type of country as the mainland south of them, covered with cacti and thorn bushes.

Margarita is also a part of the dry zone, with the same lack of moisture and xerophytic vegetation. It lies less than 30 kilometers from the coast, with islands intervening to simplify the crossing.

Trinidad is nearer than either of the two preceding, there being less than 20 kilometers of water between its southwestern tip and the delta coast. It is even shorter from the point of the Paria Peninsula to Trinidad's northwestern point. Both of these places are approximately 150 kilometers from Granada, and Trinidad is less than 40 from Tobago. The majority of voyages to the Antilles probably started from this part of the coast, since they lie nearest to the southern islands of the Lesser Antillean chain.

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[2] Jahn, 1927, p. 318.
[3] Pittier, 1932, p. 33.
[4] Pittier, 1932, p. 110.
[5] Pittier, 1932, p. 75.
[6] Pittier, 1932, p. 87.
[7] Pittier, 1932, p. 60.
[8] Pittier, 1932, p. 100.
[9] Pittier, 1932, p. 75.
[10] Pittier, 1932, pp. 38, 78.
[11] Pittier, 1932, p. 61.

Travelers approaching Venezuela from the west may follow the north coast and arrive at the Goajiro Peninsula, the Maracaibo Basin and the Falcon coast. From inland Colombia there are easy routes into the Maracaibo Basin from the Sierra de Perija, farther south across the valley of Cucuta to the Venezuelan Andes, the *llanos* or the Maracaibo area, or still farther south to the *llanos* and the Orinoco following the streams which rise in the eastern Colombian mountain chain. From the east and south the Orinoco and its tributaries present the easiest route. There is certainly archaeological and ethnographical evidence that the later people of Venezuela shared many cultural elements with the Amazon Basin and Guiana Indians. The Orinoco and its tributaries, closely connected to the river systems of the east and south, was an important factor in cultural diffusion throughout the whole of northwestern South America. Northern Venezuela is somewhat off direct routes from Panama to Andean Colombia and farther south, as well as direct routes to the Amazon via Colombian tributaries of the Orinoco. However, it lies in an ideal position for the reception of populations and cultures pushing eastward from Colombia or moving west from the Guianas and north from the northern Amazon, or still farther north into the Antilles.

# HISTORICAL AND ETHNOLOGICAL BACKGROUND

THE early history of the Conquest of Venezuela, combined with the limited data collected in recent years by the few persons who have interested themselves in the ethnology and linguistics of the area, make it possible to present a brief background for archaeological work. In the light of our present knowledge of Venezuelan archaeology, it is well nigh impossible to link the known cultures of today and of four centuries ago with the described archaeological cultures. In some cases certain aspects of aboriginal life, recorded by the early conquerors, seem to have been verified archaeologically, but in the great majority of cases there are absolutely no means of connecting the people represented by remains in the ground with those encountered in the pages of the chroniclers. Notwithstanding, a great deal can be learned from a study of the early history and the few remaining living aboriginal groups, all of which is important to the archaeologist, if only to remind him of how little of the complete record of the lives of the Indians he is obtaining.

Necessarily, the Spaniards and other conquerors were most impressed by weapons, dress, houses, foodstuffs and behavior; none of these important features have been brought to light archaeologically in Venezuela, except indirectly in the case of foods, and some evidence for house structure. Imperishable artifacts and burials, with the attendant evidence concerning daily life and religion, if they can be supplemented by historical notices, present really valuable historical pictures, but, unfortunately, no accounts exist which may be related to particular excavated sites in the Venezuelan area.

A further drawback to the fullness of the background lies in the fact that in the areas which have supplied archaeological material, Indian culture has long since disappeared; what data have been secured are chiefly linguistic, and these are far from complete, according to present-day standards. Language is an important factor in anthropological classification, but linguistic boundaries may not be considered of great significance in archaeology. The linguistic demarcation of cultural provinces has always been an error, and furthermore, in the archaeology under consideration, there are absolutely no sure means of linking any of the cultures or phases of culture to a given linguistic stock.

As one reads the few works published in recent years on the ethnology and linguistics of Venezuela, there appear a number of interesting and important references to, and quotations from, the accounts of the early historians, but one is left with very little knowledge of the history of the Conquest as a whole. Here an attempt has been made to arrange some of the material dealing with the northwestern Indians in chronological sequence as far as possible, in order that the reader may follow the events of this relatively little known conquest from 1498 into the sixteenth century. At the conclusion of the historical account, the position of the various aboriginal groups in linguistic and cultural classificatory systems is considered.

The first Europeans to view the coast of what is now the Republic of Venezuela and the neighboring island of Trinidad, geographically and culturally in the same province, were Christopher Columbus and his companions on his third voyage, in 1498. Two very similar accounts of this voyage have been preserved: Columbus's "Journal," copied by Las Casas from the original with some abridgment; and a letter to Ferdinand and Isabella of Spain, written from Santo Domingo, immediately upon the arrival of Columbus at that island after his discovery of the southern continent. The first of these documents has been translated and annotated by Jane,[1] the second by Lawrence and Young.[2]

Columbus sailed south on his third voyage, touching at Madeira, the Canaries and the Cape Verde Islands before striking westward. His first landfall was the southeastern point of the island of Trinidad, to which he gave its present name. Skirting the coast in a southerly direction, he saw a canoe in the distance and some houses on the shore. Later he saw signs of the inhabitants, and many villages, but the people did not appear until he had continued along the south coast and reached Punta del Arenal, the southwestern extremity of the island. Here a large canoe appeared from the east, carrying twenty-four young men, armed with bows and arrows and equipped with wooden shields. Shields were new to Columbus as weapons of defense among the natives of the Indies. Their arrows were feathered and tipped with bone. These Indians were described as taller than those of hitherto discovered islands, lighter in color and well built.

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[1] Jane, 1930, pp. 267–291.

[2] Lawrence and Young, 1931, pp. 280–300.

"They wore long, straight hair, cut in the Spanish style, and bound their heads with a strip of cotton woven in coloured patterns, which I might have mistaken for Moorish gauze. They wore another such strip around the waist, covering themselves therewith instead of with breeches." [3] This is the first written description of South American Indians.

After proceeding through the Serpent's Mouth, the strait separating Trinidad from the mainland, and sailing northward into what is now the Gulf of Paria, Columbus sighted the Peninsula of Paria, which he called "Isla de Gracia," believing it to be an island.

On the coast of this land, the Spaniards saw large numbers of Indians and many villages and signs of habitation. Some of the Indians were captured by the simple ruse of asking them to take one of the pilots ashore in a canoe, which was then upset by the pilot, who caught them in the water. These men are described in the "Journal" as wearing their hair long or cut as the Spaniards' was, never clipped as in Santo Domingo. The men had their genitals covered, but the women were completely naked. The Admiral treated the captives kindly and sent them off with presents, which was an occasion for many canoes to visit the ships, bringing "bread and water, and some drink like green wine; they were well equipped with bows and shields, and almost all their arrows were poisoned." [4]

As Columbus made his way along the coast of the Peninsula of Paria, he met still more people, presumably on the small islands at the western end of the Gulf. The name "Paria," although not used by Columbus, was told him by the Indians as the name of the land.[5]

While off the southern shore of the Gulf of Paria, large numbers of Indians in canoes visited the Admiral's fleet. Many of these wore pearls and ornaments of gold. The pearls were in strings on their necks and arms, and gold on their breasts as ornaments, "fashioned like horseshoes," [6] or in nuggets. Evidently the pearls excited the cupidity of the Spaniards more than the gold, which they recognized as of poor quality. Columbus was given to understand by signs that both pearls and gold came from the west. Several of the Spaniards were invited ashore by "two important personages, whom they took to be father and son," [7] who "led them to an enormous house, which was not round like the rest, but built with two sloping roofs; it contained many seats, upon which they placed our men, and others where they themselves sat. They had fetched bread, and many kinds of wine, both white and red; this was not made from grapes, but one variety apparently from one sort of fruit and one from another. Some must be produced from maize. . . . The men all stayed together at one end of the house, the women at another." Peter Martyr's account of this feast [8] agrees closely with the "Journal" and the letter, but adds that the seats upon which the principal Indians and Spaniards sat were of very black wood and decorated with great skill.

In the "Letter" [9] Columbus describes the canoes of the Indians of the Paria region as "larger than elsewhere, better made and lighter, and each has a room in the center as a cabin, for the use, as I saw, of the chiefs and their wives."

Columbus now attempted to sail westward, believing himself to be south of an island, rather than in the Gulf of Paria; after he had failed to do this and had passed through the "Dragon's Mouth," the strait separating Trinidad and the eastern extremity of the Paria

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[3] Letter of Columbus, Lawrence and Young, 1931, p. 283.

[4] "Journal," Jane, 1930, p. 279.

[5] Letter of Columbus, Lawrence and Young, 1931, p. 286.

[6] "Journal," Jane, 1930, p. 280.

[7] "Letter," Lawrence and Young, 1931, p. 287.

[8] MacNutt, 1912, p. 137.

[9] Lawrence and Young, 1931, p. 288.

Peninsula, and had continued westward as far as the island of Margarita, which he named, he realized at last that he had found a great mainland. He was further convinced of this by the large amounts of fresh water brought down into the Gulf of Paria by the river now known as the Orinoco. He did not stop at Margarita, but continued to Santo Domingo, never to visit again the South American mainland.

Shortly after the return of Columbus from his third voyage, he was followed to Trinidad and Paria by Alonso de Ojeda, who had with him Juan de la Cosa, a former pilot of Columbus, and Amerigo Vespucci. Ojeda himself had accompanied Columbus on the second voyage.[10]

Thus far we have not been concerned with the controversy in regard to Vespucci's voyage, said by himself to have been made in 1497. If anything is made clear to the reader of this early history, it is the general disagreement in the acceptance of the voyage. The weight of critical opinion during the past century has been against the claim, however. What concerns us here is not the question of priority, but simply the question of how much, if any, of the account contained in the letter written to Piero Soderini Gonfaloniere in 1504,[11] describing the "first voyage," may be utilized as a part of the ethnological background of Venezuela.

Since the evidence, in itself of no importance here, seems to indicate that Vespucci made no voyage in 1497, and we know that he did accompany Ojeda to the northern coast in 1499, the question arises as to just what coast the Soderini letter was intended to describe. Ries [12] has used the ethnological material contained in the letter as a test to determine whether Vespucci could have been describing the Honduranean or Yucatecan coasts, where he would have encountered the Maya and where he is thought by some commentators to have arrived. His descriptions of the Indians do not appear to Ries to have been of Maya people, but of groups living in the Lesser Antilles, Trinidad, or possibly on the mainland. To me the latter seems as reasonable as the former, since the entire account is rather general and might apply to a number of tribes.

Only two geographical names are given in the account of the "1497" voyage. One of these has been recorded in two ways, as "Lariab" or "Parias," a fact which has given rise to considerable controversy. Suffice it to say that it has been demonstrated by Northup, as decisively as is possible from the existing texts, that "Parias" and not "Lariab" was the word used by Vespucci in the original letter, with reference to a "province" on the coast. This is of great importance, since, as Northup says, it is a fact which "will more than ever confirm in their opinion those who reject the authenticity of the first voyage." [13] The word "Parias," of course, immediately suggests the "Paria" of Columbus and tends to confirm the suspicion of a number of commentators that the account of the alleged first voyage was actually a fanciful account of several of the events of the second voyage, the latter made with Ojeda in 1499, and with the probable addition of a number of actual fabrications, including the date. What seems the most obvious example of a splitting of events between the two voyages is the reference in the account of the first voyage to the discovery of a pile dwelling village. No such incident is related in the account of the second voyage, although we know from many sources that the pile dwellings from which Venezuela finally took its name were actually discovered by Ojeda, with Vespucci, in 1499. With this brief evaluation of Vespucci's material, which has been purposely made as simple as possible, omitting most of the historical aspects and all questions of Vespucci's ability to compute his position, we may continue with Ojeda's voyage. The account of Vespucci's first voyage will be used where it seems pertinent to do so, but with the reservation that none of it may actually refer to the particular spot under consideration and that some of it may be utterly false, although there seems little reason to believe that the account is not based on the observations of some one, if not Vespucci himself.

Ojeda followed Columbus's route via the Canaries and thence farther south, sighting the continent probably somewhere on the Surinam coast.[14] Following the coast line westward, Ojeda arrived at Trinidad and Paria, where he saw Indians of the same kind as had Columbus; the accounts of Vespucci, of his "1497" voyage, and those of Las Casas and Herrera are so similar that there seems little doubt that both of the latter, who did not believe that Vespucci had made such a voyage, took their material from his narration, believing that it actually referred to Ojeda's voyage.

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[10] Moses, 1914, p. 2. See this page for a list of the principal voyages of discovery to South America in the sixteenth century.

[11] Northup, 1916, First Voyage.

[12] Ries, 1936.

[13] Northup, 1916, Introduction, p. 20.

The people are described as naked, but sometimes wearing small aprons of cotton and decorating themselves with plumes, strings of beads made of fish bones and with white and green stones placed in the cheeks, lips and ears. For weapons they had excellent bows and arrows, the latter pointed with the teeth of fish or animals or of wood, hardened in the fire. They also carried wooden-pointed spears and knobbed clubs. Vespucci does not mention shields, which may mean that the Indians referred to lived near Cumana or somewhere on the coast west of Paria and Trinidad. Navarette,[15] however, says that shields were a part of their equipment. As stated above, there is no certainty in regard to the exact locations of any of the people described by Vespucci; with one or two exceptions, the material may probably be considered to refer to the northern coast between Trinidad and Coro. The account says that there were many differences in language encountered along the coast, and apparently customs varied considerably as well. Food was eaten from gourd or earthenware containers and consisted of game, fish and fruit and "Iuca" (yuca); this was manioc. Vespucci states that they also ate a root called "Ignami" or "Carabi." Ries [16] states that these were yams. Vespucci may actually have seen some cannibalism, but his statement that they ate little flesh other than human is undoubtedly far from the truth.

Houses, like those described by Columbus, were communal, stoutly built and thatched. Vespucci says that in one there were living six hundred people, which is probably a great exaggeration. These people slept in hammocks, described by Vespucci as made of cotton.

The sick were treated by various means — bathing, sweating, fasting and blood-letting from the legs. Herbal emetics were also used. In some places when a man was seriously ill, he was left in the forest in his hammock, with enough food and water for several days. If he died he was left on the spot; if not, he was welcomed to the village. It seems very likely that this practice of leaving a man to die in a hammock may have been a preliminary to secondary burial; Vespucci does not imply this, but after exposure in the hammock for some time the remains of the body might conveniently be gathered up and buried in a vessel. In other places burials were made with food and water in the grave; Vespucci does not describe anything which appears to have been other than primary burial.

Ojeda and his men left Paria and continued along the coast until they reached the Vela de Coro; on the way they visited several islands, including Margarita,[17] and were attacked by the Indians at Chichirivichi, probably near the present port of Puerto Cabello. Somewhere along the coast they sighted a small island; this island and its inhabitants are described in the account of the "second voyage"; [18] its location is not certain. The natives were "bestial and ugly . . . and all had their cheeks stuffed out inside with a green grass which they continually chewed like cattle, so that they could scarcely speak; and each had around his neck two dry gourds, one of which was filled with that grass which they had in their mouths, and the other with a white flour which seemed like powdered chalk; and from time to time they would dip into the flour-gourd a splinter which they would keep moistening in the mouth; then they would insert it into their mouths on both sides of the cheeks, powdering the grass which they had in their mouths; and this they would do very frequently." This apparently is a description of the use of some narcotic taken with lime. The people of the island were a simple fishing folk, using no real houses.

Vespucci states that from this island they continued to the "Island of the Giants" (Curacao); Navarette[19] says that they went from La Vela de Coro directly to this island. As usual, Vespucci's account is extremely vague; Navarette determines the name and the identity of the island not only from Vespucci, but from a declaration made by Ojeda and some of his shipmates in connection with litigation some years later. The name "Island of the Giants" was given on account of the great stature of the natives, which again has undoubtedly been grossly exaggerated by Vespucci, since there is no later reference to the Indians of Curacao being taller than their neighbors. These people were armed with bows and arrows and knobbed clubs, going naked and living in "huts" which are not described.

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[14] Navarette, 1829, pp. 4–11. Accounts of this voyage, aside from Vespucci's letter, may be found in Herrera, 1725, vol. 1, decade 1, book 4, chaps. 1–3, and in Las Casas, 1927, vol. 1, pp. 547–551; vol. 2, pp. 38–56, and many numerous more recent histories.

[15] Navarette, 1829, p. 6.

[16] Ries, 1936, p. 52.

[17] Navarette, 1829, p. 6.

[18] Northup, 1916, p. 27.

It was from here that Ojeda led his followers to the Gulf of Coquibacoa, now called the Gulf of Venezuela, stopping at the Peninsula of Paraguana on the way.[20] Here, on the eastern shore of Lake Maracaibo, near the narrow estuary which forms the connection between sea and lake, the Spaniards saw the pile-dwellings which later were responsible for the name "Venezuela." Vespucci's account of such a village in the "first voyage" does not absolutely identify it as the one seen by Ojeda, but there is little doubt that Vespucci's account refers to the Maracaibo area. The houses were set upon piles over the water, with connecting drawbridges between them. Many canoes made of single tree trunks were in evidence as well. The houses, about twenty in number, were said to be large, and some accounts say "bell shaped,"[21] although the Soderini letter as translated by Northup[22] says the houses were built "after the fashion of huts." Northup has proved that the latter is correct, a fairly important point, since the description of the houses as "bell shaped" naturally leads one to suppose that they were round and conical, which apparently they were not, or, at any rate, were not actually said to have been. The accounts contain no more of importance in regard to the inhabitants, except that they used bows and arrows.

Shortly after Ojeda's voyage, Pedro Alonso Nuñez and Cristobal Guerra made a trip to the pearl coast of eastern Venezuela.[23] The people here chewed a tooth-blackening herb;[24] this was apparently fairly usual in eastern and north coastal Venezuela. Nordenskiöld has mapped the distribution of the custom.[25] It is very common in the western Amazon and also is found in northern Colombia. There was probably a continuous distribution of the custom east of the Andes.

The penis gourd was also noted by Nuñez and Guerra. Some sort of penis cover, usually a gourd, was in common use in Venezuela, in the west as well as the east; from Nordenskiöld's map[26] the penis cover appears to have had a decidedly eastern and Amazonian distribution but was also common in Colombia.

The Indians of the north coast of eastern Venezuela, of the Cumana area, were soon decimated by the Spaniards. Many of them were put to work in the pearling grounds at Cubagua, which the Spaniards from Santo Domingo immediately began to exploit,[27] treating the Indians with great cruelty. It was here that Las Casas first became aroused to defend the Indians. However, there is little in the accounts which is pertinent to the present sketch.

In the western part of Venezuela first contacts were made from Coro, founded in 1527. In the following year the entire north coastal area, from Maracapana to Cabo de la Vela, was granted to the Welser Company of Augsburg, on condition that settlements should be made.[28] The first governor, Ambrosius Ehinger (also spelled Alfinger or Dalfinger) made an exploratory trip into the Maracaibo Basin. On the western shore he encountered Indians who were called Onotos,[29] a naked fishing people living in pile houses in the Lake. Their weapons were bows and arrows and *macanas* (heavy wooden swords). Speaking of the Indians of this general region, Oviedo y Valdes [30] says that as a reward for deeds of courage, paint was applied to various parts of the body. After three such deeds, paint could be applied from the corners of the eyes to the ears. This practice accounts, according to Jahn,[31] for the Spaniards often calling these Indians *Alcojolados*, a term of north African origin signifying people with painted eyes.

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[19] Navarette, 1829, pp. 6–7.

[20] Navarette, 1829, p. 8.

[21] Herrera, 1725, vol. 2, p. 218. Navarette, 1829, p. 219. This is from Vespucci's account, translated from an early edition of the *Cosmographiae introductio*. Las Casas, 1927, vol. 2, p. 47.

[22] Northup, 1916, p. 12. See Introduction, pp. 12–13, for evidence in regard to the translation.

[23] Navarette, 1829, p. 11.

[24] MacNutt, 1912, p. 153.

[25] Nordenskiöld, 1920, map 8.

[26] Nordenskiöld, 1924, table and map 19.

[27] Moses, 1914, pp. 29–37.

[28] Moses, 1914, chap. 4.

[29] Oviedo y Baños, 1885, vol. 2, p. 229.

Farther south, still in the Maracaibo Basin, lived the Bobures,[32] a gentle people armed only with "blowguns (*cerbatanas*) with which they shot little arrows, wrapped with feathers and infected with a certain herb which did very little damage." The form of these blowguns is not known. Nordenskiöld [33] indicates the occurrence of blowguns in the Maracaibo Basin, as well as at Santa Marta, Colombia. These two points in South America are the farthest north from whence blowguns, so common in western Amazonas, definitely are known.

The same Bobures people are described [34] as naked, the men wearing a penis gourd, the women, a small cloth apron. In the same place Oviedo noted that higher in the mountains, to the west, lived the Buredes, speaking the same language as the Bobures. These people wore their hair cut off and gathered up on their heads like crowns and were called "Coronados" by the Spaniards with Ehinger.

Higher in the mountains of the Perija, Ehinger found the Guanaos,[35] a tall people wearing cotton mantles and caps. They traded salt for gold and made gold ornaments. These were probably a people culturally close to the Kagaba of Colombia.

Several other tribes, similar to the simple Bobures were living at the southern end of the Maracaibo Basin. The now notorious Motilones of the Perija area [36] were so named from their cropped heads. Historical accounts contain practically nothing about them, and there is little known of them today. They were apparently definitely of the Carib stock, linguistically, as were probably most of the people living in the Maracaibo Basin. Although the evidence for this is not perfectly conclusive, Jahn has made a very logical argument [37] in favor of what seems to me a most reasonable hypothesis.

It is apparent that the people of the Maracaibo Basin were living in very much the same way as those of the east and north coasts, simple folk with few clothes, living on fish and game and probably manioc, although this does not seem to be mentioned from the Maracaibo Basin proper.

While Ehinger was exploring and raiding the Indians of the west, who finally killed him, Nicolaus Federmann [38] arrived in Coro and organized an expedition of his own, to the south of Coro, apparently, although his route is uncertain. His account of this journey has been translated by Arcaya.[39]

The Indians of the Coro area and much of the interior were called Caquetios. They were probably Arawaks, although only a few words of their language have been preserved. They have been indicated as Arawak speakers on all the recent linguistic maps of South America, however. Federmann found them to be a tall and pleasing people, physically, living in many large villages, trading with each other and with other tribes, especially for salt. In the Barquisimeto region, in what is now the State of Lara, Federmann stayed for some time in a Caquetio village but noted nothing but the presence of gold, of which there were supposed to have been large quantities, probably exaggerated.

The Caquetios fought with bows and arrows, which were not poisoned, and with *macanas*. Their houses were on piles, in some cases at least, for Federmann definitely speaks of such a house [40] when telling of a fight with the Indians. It was, however, on dry land.

Oviedo y Valdes gives some account of the Caquetios [41] of Falcon. When a *cacique* died, his body was slowly roasted, the bones were dried and ground up, made into a porridge and eaten. On the occasion of the death of a *diao* (an especially powerful *cacique*) the body was placed in a hammock suspended over a low fire and thus preserved by smoke and heat, "so that nothing but skin and bones remain." The mummy was then placed in a new hammock and left in the house until it fell apart. The bones were then ground up and eaten as a porridge, or put into a "wine which is made of maize"; the latter was done only in the case of the bones of a paramount chief. The distribution of endo-cannibalism and mummification by fire drying is discussed later (p. 153). No mention is made in any of the accounts of urn burial, but apparently endo-cannibalism and preservation were practiced only in the cases of important men.

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[30] Oviedo y Valdes, 1852, p. 322.
[31] Jahn, 1927, p. 34.
[32] Oviedo y Baños, 1885, vol. 2, p. 209.
[33] Nordenskiöld, 1924, map. 7.
[34] Oviedo y Valdes, 1852, p. 271.
[35] Jahn, 1927, p. 39.
[36] Jahn, 1927, chap. 2.
[37] Jahn, 1927, linguistic map, and pp. 42–43.
[38] Moses, 1914, p. 63.
[39] Arcaya, 1916.
[40] Arcaya, 1916, p. 113.
[41] Oviedo y Valdes, 1852, pp. 297–300.

In the course of the same description, Oviedo y Valdes says that the Caquetios cultivated tobacco, which they smoked in the form of cigars and which they used to foretell the future.

Besides the Caquetios, Federmann encountered other Indians, some of whom did not understand the Caquetio language. These were Ayomanes, Jirajaras and Gayones, whom he met at various points on his journey. Jahn[42] is of the opinion that these people may have been affiliated linguistically to the Betoy stock and thus possibly to the Chibchas. There does not seem to be any essential agreement upon this point. The Jirajaras were said to be cannibals and were the enemies of all the surrounding tribes.

The Ayomanes, also cannibals, were dwarfs in stature, although occasionally there would be a normally tall person among them. In spite of their size, they were very warlike and were continually fighting their neighbors. Jahn states that dwarfs are not uncommon today in the State of Lara, where the Ayomanes lived. Their height, described by Federmann as from four to five *palmas*, would have been from 90 to 100 cm., according to Jahn, although this seems incredibly short.

Of the Gayones and other groups encountered by Federmann, including the Achaguas or Xaguas, the Ciparicotes, Guaykeries and Cuibas, there is little of importance in the early literature. Jahn places the Achaguas as Arawak on his linguistic map, as do others. The Ciparicotes and Guaykeries are said to have probably been Carib and the Cuibas Betoy.

The Welser Company sent out several other expeditions. One of these, under Georg von Speier (Jorge de Spira), in 1534, went to the western *llanos*, south of the Andes, as yet unexplored by the Spaniards or Germans. When they lacked food, a group was sent into the foothills, where they found more than 1500 *fanegas* of maize[43] stored in a house (a *fanega* is 1.60 bushels). This was the first entrance of the Europeans into the Andes.

The Welsers, however, did not live up to their contract with the Spanish to colonize the country. Instead, they persisted in enslaving and brutalizing the Indians, made no attempt to found towns and quarreled with the Spaniards. In 1546 their grant was rescinded.[44] Under Spanish rule there was considerable progress in Venezuela. As Moses points out, the introduction of the *encomienda* system tended to increase the number and size of permanent settlements. In 1547 Juan de Villegas discovered Lake Valencia, then called Lake Tacarigua after a local Indian tribe. The account of this discovery from the archives in Caracas has been published by Davila.[45] Unfortunately, there is no description of the Indians in the vicinity of the lake, but there is a statement to the effect that for sixteen years the Indians in the region had been subject to raids by the people of Cubagua and that nearly all of them had been destroyed. Those who had been able to save themselves had fled to the mountains. The people of Cubagua could hardly have been other than Spaniards, since they had started pearl fisheries there at an early date and were notorious slave hunters. Thus, it seems very likely that Villegas was not the first Spaniard to reach Lake Valencia, but that he had been preceded by others from the east, who had enslaved the Indians or driven them out. Archaeological evidence from the Lake Valencia Basin points to a very large population. It is hardly possible that the Spaniards would have failed to comment upon the people living on the shores of the lake, if they had encountered them at this time under normal conditions.[46]

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[42] Jahn, 1927, chap. 5.

[43] Simon, 1882, p. 113.

[44] Moses, 1914, pp. 68–78.

[45] Davila, 1927, pp. 285–292.

[46] Oviedo y Baños, 1885, p. 226, records "the abundance of Indians" in the Lake Valencia region in 1555. They resisted the party sent to found the city of

There is no certainty as to language in the Valley of Aragua. Jahn divides the area between Carib and Arawak,[47] but he has told me that he believes the archaeological remains to be Arawak. Certainly there were Caribs to the east, in the mountains between Lake Valencia and Caracas, and east of Caracas, who fought bitterly against the Spanish before they were finally driven from the Valley of Caracas [48] and the surrounding mountain valleys in 1569.

A short sixteenth century account of the Indians of Caracas [49] may throw some light on the Lake Valencia Indians; probably the two groups shared a generally similar culture, although they may not have been linguistically the same. Maize, manioc, sweet potatoes, beans and certain tubers and fruit formed their vegetable diet. A leaf, probably coca, was chewed, which "takes away hunger and thirst and gives strength to work," and tobacco was both smoked and taken as snuff. Men wore the penis gourd, women, a short cotton apron. Weapons were bows and arrows, often poisoned with a putrescent concoction, and the *macana.*

The Andean region was not penetrated until after 1549; in that year Diego Ruiz Vallejo entered the Bocono area (see fig. 1 for Distrito Bocono). This he reported as a "very rich province, fertile, with all sorts of fruits and much cotton, which was what those of the Tocuyo (see fig. 1) desired most, having devoted themselves to the manufacture of cloth of this material, and which, excellently woven, they traded to other places where it was highly valued.[50]

The city of Trujillo was then founded but had to be abandoned as a result of uprisings brought on by the abuse of the Indians. The Indians whose territory was taken were the Cuicas, a naturally peaceful people, and those of Escuque, who were responsible for the revolt. At nearly the same time (1558) Juan Rodriguez entered the Merida region from Pamplona, in Colombia. The Indians of the western Andes, as well as those of Trujillo, spoke closely allied languages; as yet these languages have never been allied to any other stock. Some linguistic material has been collected,[51] even in fairly recent years, but no one has succeeded in demonstrating that this Timotean language is related to any of the surrounding stocks.

Jahn [52] and Febres Cordero [53] have listed a large number of tribes (over eighty) under the two primary groupings of Cuicas and Timotes. The Caraches are listed among the former. Castellanos, in the section of his poem which tells of the Vallejo expedition to the Andes,[54] said that the Valley of Carache was heavily populated and that the Indians resented the Spaniards. I have not been able to find any good account of this tribe, from which the present town and district of Carache are named, and which has produced a considerable quantity of archaeological material. Febres Cordero says [55] that "the Cuicas . . . had many divisions, including the Caraches, who retained their organization for a long time." There is no reference to any source in this connection. However, there is a local tradition in Trujillo, and especially in Carache, that the Indians defended themselves in the Valley of Carache for some time after the Andean region to the westward had been conquered by the Spaniards. Castellanos certainly suggests that they were warlike. The nature of the archaeological material from Carache points to close relationship with the people of Curacao, Aruba and Bonaire, as well as with those of the coastal region of Falcon, rather than with those of the higher Andean region. There is thus a possibility that the Carache archaeological material is not Timotean. If it is, typical Andean culture, as far as can be determined archaeologically, was never strong at the foothill site of Carache.

The many tribal divisions need not be listed here, since they are of no present importance. There is, unfortunately, very little description of the Andean Indians in the early ac-

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Valencia. This account seems inconsistent with that of Villegas's discovery of the lake, but it is possible that many of the Indians, who had withdrawn, returned in the interval between 1547 and 1555.

[47] Jahn, 1927, linguistic map, and p. 222.

[48] For the Conquest of the Teques and Caracas, see Marcano, 1889, and Oviedo y Baños, 1885.

[49] Latorre, 1919, pp. 79–86.

[50] Oviedo y Baños, 1885, vol. 1, p. 232.

[51] Jahn, 1927, pp. 280, 396; Briceño-Iragorry, 1929.

[52] Jahn, 1927, chap. 6, p. 334.

[53] Febres Cordero, 1921.

[54] Castellanos, 1852, p. 240.

[55] Febres Cordero, 1921, p. 61.

counts. Simon[56] described the Cuicas, in connection with the expedition of Paredes into Trujillo. They were naked and peaceable (the Cuicas area is not all in the high Andes). They had cotton, which the women wore as small aprons; the men wore the penis gourd. Simon says: "They have, in particular houses, dedicated for this alone, like temples, figures badly formed from cotton thread, baked clay and sticks. To these they offer small bits of the same thread, beads of many-colored stones, dyed bones and especially green stones . . . they also offer tiny cotton mantles, salt and grains of cacao; they sacrifice deer in these temples, burning the meat and hanging the heads on the walls . . . there are many wizards who talk with the devil, to whom they offer at his command the fat of the cacao in earthen braziers." Castallanos reported[57] that these Indians had only a very little gold.

Jahn has summarized[58] what has been handed down by tradition and also what little has been published dealing with this little known but important highland group. They were agriculturalists (see "Geographical Background") living in small houses of wattle or sometimes, in the coldest areas, of stone, often in the lee of a large boulder or outcrop. The clothing of the highland people was of cotton, consisting of long gowns, or, as Jahn was told in Mucuchies, of superimposed ponchos of contrasting colors. The latter may have been a post-Conquest garb, however.

In the center of each village a large structure was used for ceremonies. Jahn states that fear of *Ches*, apparently a powerful, malevolent being, is still found among the Andean descendants of the Timotes. Masked dances, accompanied by flagellation, according to Jahn, formed a part of their ceremony. This is an Amazonian and eastern culture element, in all probability.

Of metals, they knew only gold, which Jahn believes they obtained in trade.

Weapons consisted of *macanas*, bows and arrows and blowguns, the latter used only in the forests on the Maracaibo Basin slopes.

Ropes were stretched across deep stream beds, which were crossed by hanging from the ropes on wooden hooks, pulling oneself or being pulled by a companion with a rope.

There is actually very little historical or ethnological material from Venezuela which is useful to the archaeologist. Nothing is known of the people who lived where excavations have recently been made; even their linguistic affiliations, the least important consideration, cannot be ascertained. More work in certain parts of Venezuela might produce evidence which could be correlated with history and tradition; the Maracaibo, Lara, Andean and Paria regions are such places.

The chief contribution of the old accounts is in the description of the general appearance and cultural level of the Indians. Thus, at least, we know that the archaeological material from warm, lowland sites, such as Lake Valencia, was in all likelihood left by a rather simple people, with few or no clothes, who lived in well built houses completely of wood and thatch, probably had corn, almost certainly had manioc and were accustomed, probably, to adorn themselves with ornaments in nose, cheeks, lips and ears. Hammocks were probably in use. Cotton seems to have been well known and widely used, especially in the highlands. Gold was always rare in Venezuela but was apparently known and obtained by trade.

Linguistically, it is well known that the eastern part of Venezuela was occupied chiefly by Caribs. In the west, according to Jahn,[59] there were Arawaks, spread over a large area including the Goajiro Peninsula, where they are definitely known today. Caribs in the west lived chiefly in the Maracaibo Basin; their descendants are the Motilones of the Perija. Scattered groups of Betoy are probably doubtful, linguistically. The isolated Timoteans, in the Andes, have never been proved by a trained linguist to represent a separate stock. Actually, there is probably no very good evidence for the presence in northwestern Venezuela of known languages other than Carib and Arawak, and it is doubtful whether enough of the possible Betoyan and Timotean languages could ever be gathered to permit a conclusive study to be made. The collected vocabularies are little more than short word lists, poor material for the study of linguistic relationships.

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[56] Simon, 1882, pp. 239–241.

[57] Castellanos, 1852, p. 241.

[58] Jahn, 1927, pp. 310–324.

[59] Jahn, 1927, linguistic map.

# PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS IN VENEZUELA

INTEREST in Venezuelan pre-history has been keen, in the past, only among a few Venezuelans and a very few outsiders. The Valley of Aragua has attracted many local investigators and is discussed in more detail below. For many years there has been some interest in finds when they were made, but very little effort has been expended, officially or privately, to conduct careful excavations.

In the 'eighties of the last century, Adolph Ernst, Director of the National Museum in Caracas, sent to Berlin a number of small pottery objects, figurines and stone axes, chiefly from the Andean caves. His short papers[1] deal with archaeological, racial and linguistic problems. Ernst never made excavations of any extent, but he built up the collections in the National Museum and aroused some interest in Germany. At the same time, A. Jahn and M. V. Marcano were active in Aragua. The former, as engineer for the German-owned railroad from Caracas to Valencia, made archaeological and ethnological investigations when time permitted. M. V. Marcano, whose brother, Gaspar Marcano, published his work, besides excavating in Aragua, conducted investigations in certain caves and open sites in the region of the cataracts of the Orinoco, near Atures.[2] Here eight sites were noted, containing urn burials in locally typical vessels. This region and the remains there have also been noted by Humboldt,[3] Crevaux,[4] Chaffanjon[5] and Hamy.[6]

At about the same time, in Curacao, Aruba and Bonaire, the Dutch Islands off the State of Falcon on the north coast of Venezuela, geographically a part of Venezuela, a Dutch priest, A. Van Koolwijk, was collecting urn burials from a number of small village sites. This work was in part described by Van Koolwijk, but I have not been able to obtain the "Tidschrift van het Nederlandsche Aardrijkshundig Genootschop," volumes 7 and 57, in which he published his finds. However, further description was published by Leemans[7] and in much more detail by Josselin de Jong,[8] who has gathered all the relevant data together in two papers.

The next extensive work was done in 1903 by Jahn, in Aragua, and is described below in the section dealing with the sites in the Lake Valencia region. From this time until Requena's interest led to considerable excavations in the same region, no archaeological digging on any considerable scale is reported in the literature from continental Venezuela. However, in 1912 and 1913 J. W. Fewkes excavated in the Tcip-Tcip shell-heap at Erin Bay,[9] on the south coast of Trinidad, another island geographically but not politically a part of Venezuela.

In 1915 Theodor de Booy[10] made further investigations in shell-heaps on the east coast of the same island, at the St. Bernard middens, just south of Cape Mayoro, which produced a large amount of material, including painted pottery, quite unlike Fewkes' Erin Bay finds. In the same year De Booy visited Margarita Island, off the northern coast of Venezuela. Here he found that most of the archaeological material was on the surface (the island is exceedingly dry), but on the northeast coast, near the town of San Jose de Paraguachi, the Giri-Gire shell-heap afforded an opportunity for excavation.[11]

On the mainland archaeology remained quite unplanned until 1930. A few finds were recorded, chiefly from the Andean region and the *llanos*. About 1900 M. Grisol discovered some urn burials on the middle course of the

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[1] Ernst, 1871, 1872, 1878, 1884, 1885a, 1885b, 1885c, 1886a, 1886b, 1886c, 1886d, 1888, 1890.

[2] Marcano, 1890.

[3] Humboldt and Bonpland, 1821, vol. 5, pp. 119–120.

[4] Crevaux, 1883, pp. 548, 561.

[5] Chaffanjon, 1889, p. 183.

[6] Hamy, 1897.

[7] Leemans, 1904, pp. 25–35.

[8] Josselin de Jong, 1918, 1920.

[9] Fewkes, 1914, pp. 200–220.

[10] De Booy, 1917, pp. 471–486.

[11] De Booy, 1916, pp. 1–28.

Arauca, which were described by Verneau.[12] Earlier finds in the same region of the plains had been made by F. Geay and described in 1895.[13]

For many years the mounds and causeways, or *calzadas*, of the *llanos* have aroused the interest and speculation of antiquarians. These *calzadas* are often many kilometers in length, 1 or 2 meters high, and from 5 to 10 meters wide. Many conical mounds of varying sizes occur in connection with them. They are almost exclusively in the States of Zamora and Portugesa, but there are probably others unreported from south of the Apure. Although they have been commented upon by various authors, including Jahn,[14] since Fray Carvajai's[15] expedition on the Apure in 1647, Oramas alone has excavated in them.[16] Oramas had great difficulty in penetrating the hard-baked ground during the dry season, the only time when one can reach these sites with any hope of examining them properly. This, coupled with the difficulty of recruiting sufficient labor and lack of time, unfortunately, left Oramas very much handicapped in his investigations. It would be highly desirable to undertake further reconnaissance and excavation on the *llanos*.

Although a considerable number of references to specimens has been made in short local papers by Venezuelan authors, there is no account of the excavation of either cave or open sites for some years after that of Oramas in 1917. The Andean region has continually been referred to, and theories have been expounded in regard to the origin of its aboriginal inhabitants since the time of Ernst, but none of these works contain detailed archaeological evidence. References will be made to many of them in the section dealing with the Andean region; the most authoritative are probably the works of Tulio Febres Cordero,[17] Jahn[18] and Briceño-Iragorry.[19]

In 1915–1916, H. J. Spinden made an archaeological reconnaissance in Venezuela, going from Maracaibo to Trinidad, via the Andes, the *llanos* and the Lake Valencia region. The results of this trip were published in a short paper in 1916.[20] Among the sites visited by Spinden was that of Carache, in the State of Trujillo, where I made some excavations in 1934. Carache has been referred to as well by Briceño-Iragorry[21] and Jahn;[22] these references are to material taken from the Cave of Santo Domingo, some distance up the Rio Carache, which was exploited in 1921. The Carache sites are discussed below in connection with my work there.

No summary of work in the Venezuelan field would be complete lacking a tribute to Rafael Requena. His interest, dating from 1904, when he inspected collections in Paris, led him to make extensive excavations in the Lake Valencia region, and to the publication of "Vestigios de la Atlantida."[23]

However much one may differ with Requena's interpretations of his finds, it is impossible to exaggerate his enthusiasm for archaeology and his kindness to North American workers whose labors he has so unselfishly encouraged in his own field.

During the last few years, besides the results of increased interest in the Lake Valencia finds, several other notices have appeared in connection with work in other parts of the country. About 6 kilometers south of Barquisimeto, on the road to Rio Claro, Brother Nectario María discovered an aboriginal cemetery which he excavated in 1932–1933.[24] At about the same time Helen K. Hodson removed several urn burials and funerary ware from a site on the Punta de Leiva, 9 kilometers east of Maracaibo, on the shore of Lake Maracaibo, and sent the material to the American Museum of Natural History in New York, with letters describing her digging.

Two recent publications describe sites and archaeological material from the State of Falcon.[25] The 1933 paper describes remains from Hato Viejo; the second, remains from El

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[12] Verneau, 1901, pp. 146–167.

[13] Geay, 1895, p. 172.

[14] Jahn, 1927, pp. 217–221.

[15] Carvajal, 1892, p. 146.

[16] Oramas, 1917, pp. 138–145.

[17] Febres Cordero, 1920, 1921.

[18] Jahn, 1927.

[19] Briceño-Iragorry, 1928, 1929.

[20] Spinden, 1916, p. 326.

[21] Briceño-Iragorry, 1928, p. 7.

[22] Jahn, 1927, pp. 319–320.

[23] Requena, 1932.

[24] Nectario María, 1933.

[25] Nomland, 1933, 1935.

Mamon, La Maravilla and Coro. Hato Viejo and El Mamon are situated near the west bank of the Rio Codore, north of the town of Urumaco, respectively some 6 and 11 kilometers from the sea coast. The La Maravilla site is similarly close to the sea, to the northeast of Urumaco. The Coro remains were found only about 3.5 kilometers northwest of the town of Coro, among the shifting coastal dunes. Material from these sites consists of pottery, including burial urns and stone and shell artifacts.

In 1934 V. Petrullo[26] discovered several archaeological sites at Arauquín, in the delta of the Rio Apure, and recovered a number of sherds.

A brief notice[27] reports an archaeological reconnaissance by L. J. Korn on the Goajiro Peninsula, where a number of sites were located. For the most part they were found in the dune country near the coasts. Many secondary urn burials were found, including some on the east coast with the bones painted with red ochre.

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[26] Petrullo, 1939.

[27] American Antiquity, vol. 1, no. 3, pp. 234–236.

# THE VALLEY OF ARAGUA

## TOPOGRAPHY AND ENVIRONMENT

THE Valley of Aragua, where so much archaeological work has been done and which still contains in uncounted sites the burials and refuse of aboriginal populations, forms an environment admirably suited to the support of a relatively large community of agricultural folk.

Lake Valencia, originally known as Tacarigua, the name of one of the tribes living in the valley, covers much of the valley floor. It forms the basin of a small interior drainage system, receiving the run-off of surrounding hills, especially to the north, east and south, from twenty-two streams, many of which carry water only in the rainy season, approximately from May to December. It is a fairly sizeable body of water, measuring about 65 kilometers from east to west, about 22 from north to south at its greatest width. Its surface area is roughly 680 square kilometers; altitude above sea-level is approximately 425 meters. In its deepest parts soundings have measured over 90 meters.

The lake is studded with islands, twenty-two in number, varying in size from El Burro, over 2.5 kilometers long, to very small rocks, often covered by water during the rains.

The most interesting and important fact to the archaeologist in regard to the valley is the evidence afforded of the rise and fall of the level of the lake during the past. A glance at fig. 2 will show that at the eastern and western ends of the lake there are wide flats, while on the northern and southern sides the hills are much closer to the shores. The Peninsula of La Cabrera is a spur of these hills extending into the lake on the north. In the past the flats have been submerged, and steep land has been covered to heights of as much as 15 meters above the present level. Rise and fall of lake level is discussed later in this report in connection with the Los Tamarindos site.

The hills rise on the north to some hundreds of meters above the lake, but can easily be crossed to the sea, only some 25 kilometers distant. To the south, beyond Güigüe, the hills are much lower, and south from them stretch the *llanos* of the Apure and Orinoco. To the east, the valley extends up the course of the Rio Aragua to La Victoria, where the drainage of the Tuy begins, leading into the Caribbean east of Caracas at Paparo.

To the west the flats extend as far as the city of Valencia, the lake having once extended to within a few hundred meters of the town. South of here, on the Caño Cambur, lies the lowest point between the drainage of the lake and that of the Orinoco.

Early in the eighteenth century Lake Valencia apparently drained into the Orinoco via the Caño Cambur and the Pao, a tributary of the Portugesa. Since 1727 there has apparently been no such drainage, with the possible exception of the mid-nineteenth century period of lake rise.[1]

The whole aspect of the lake and the surrounding country is one of singular beauty and richness. The hills are covered with a thick growth of tropical vegetation and in pre-Spanish times were probably even more so, since clearing has been extensive. The flats to the east, west and northwest are also well grown with trees but are largely employed either as pastures or for agriculture. The soil on the flats, especially since it has been inundated from time to time, is extremely limey and produces fine crops of sugar cane, corn, cacao, cotton, bananas, tobacco and tropical fruits. There are still a number of deer in the valley and other game probably abounded in the region in the early days. The lake is full of fish, and the small alligator, or "bava," is still a common sight along its banks. Altogether, the valley forms by far the most attractive environment for a primitive people in the locality, made so chiefly by the lake, with its economic advantages over the plains to the south and the surrounding densely wooded hills.

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[1] For a discussion of the rise and fall of lake level in the historical past see Crist and Chardon, 1941. Humboldt (Humboldt and Bonpland, 1819, p. 149) stated that the Pao had originally been an affluent of the lake, and that it was artificially diverted at the close of the seventeenth century. Whether this is so or not, there is no doubt that the lake fell steadily in the late seventeenth and eighteenth centuries.

## ARCHAEOLOGICAL SITES AND PREVIOUS WORK

The numerous sites in the Valley of Aragua undoubtedly represent the remains of as highly concentrated a population as ever lived in Venezuela in pre-Columbian times, with the possible exception of the Maracaibo Basin. Although to the casual observer there are no evidences of former occupation, a very little talk with plantation owners and laborers reveals the fact that such evidences are constantly being found throughout the entire valley.

There are a number of well known "rich" areas which have been pretty largely exploited, and a far greater number of sites, probably representing smaller and less concentrated communities, known only from the reports of land owners and farmers. A brief summary of past work in the valley and an enumeration of the more important sites follows:

### LA MATA

The best known sites are situated on the flats at the eastern end of the lake and are the only ones marked by mounds, of which there are a considerable number. The mound group known as La Mata, or El Zamuro, was the first to be excavated and subsequently published.[2] This group is located on the right bank of the Rio Aragua, about 3 kilometers from its mouth, in the "V" formed by the junction of the Caño Diaparo with the Aragua (fig. 2). Jahn, who with M. V. Marcano carried out this work in the 'eighties, states[3] that there are about twenty-five mounds at La Mata, but more recent estimates by W. C. Bennett, who worked here in 1932, and M. del Castillo, who directed Requena's work from 1930 to 1933, place the figure at double that number.[4] An estimate of about a hundred mounds all told on the flats at the eastern end of the lake is probably conservative. It is now impossible to be sure of the exact number, since pasturing obliterates the mound contours, and the great majority have been further leveled by unplanned and unrecorded digging. The large Martinez collection of this material in the American Museum of Natural History, and part of the same original collection now in the Museum of the American Indian, Heye Foundation, was taken from these mounds some twenty years ago.

In 1903 the La Mata group was investigated again by Jahn; the material excavated was sent to the Museum für Völkerkunde, and a short paper on the work and collection was published by Von den Steinen.[5]

The site is again mentioned by Oramas,[6] but in no detail. No further recorded work was done until Requena had considerable excavations undertaken under the direction of Castillo. A brief account of this work, written by Castillo, is included in Requena's book.[7]

The most important work at La Mata, or at any of the mound groups on the eastern shore of the lake, was done by Bennett in 1932.[8] Although he spent only a few weeks in Maracay and worked only in one mound, he succeeded in obtaining more information through his exact and careful methods than had been obtained by all the previous investigators.

There exist various accounts of the structure and size, as well as of the number of mounds. Their usual shape is round or oval, and their dimensions are usually from 20 to 30 meters in diameter by about 3 meters or less in height. Some are a great deal larger; the largest at La Mata, according to Jahn,[9] measured 130 by 63 meters but was no more than 3 meters high, the usual elevation of these structures. The larger mounds of this and other groups are from my own observations somewhat assymetrical in contour, having several eminences, little higher, however, than the body of the structure. Their appearance today does not suggest artificial accumulations, due to their lowness, lack of alignment and the presence of large trees on many of them. There is no purely surface indication that they are not natural.

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[2] Marcano, 1889.

[3] Jahn, 1927, p. 221.

[4] Bennett, 1937, p. 77.

[5] Von den Steinen, 1904, p. 104.

[6] Oramas, 1917, p. 139.

[7] Requena, 1932, p. 278.

[8] Bennett, 1937.

[9] Jahn, 1927, p. 222.

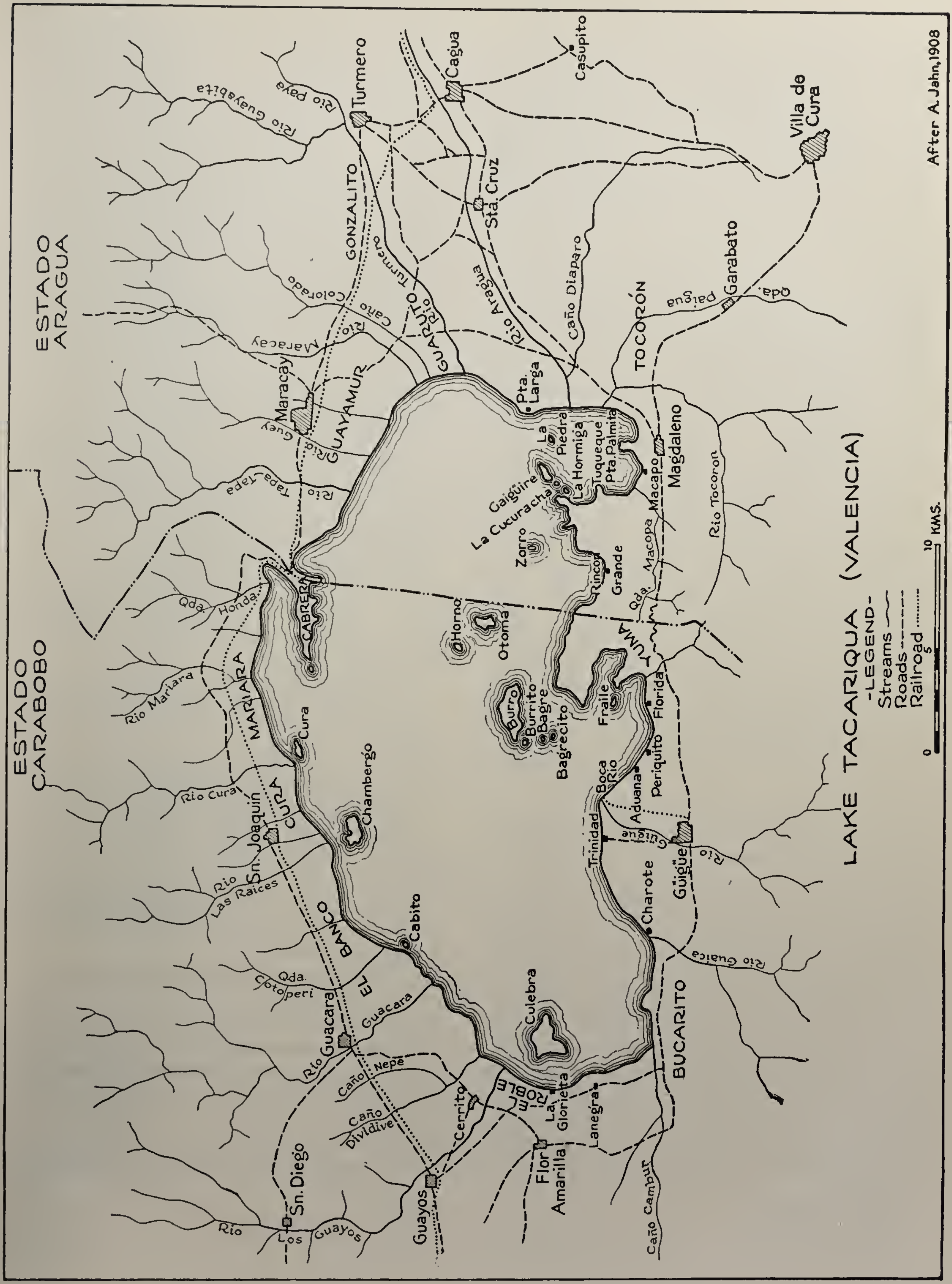

FIG. 2. Lake Tacariqua (Valencia).

To understand the structure of these mounds, one must recall their position on the low flats bordering the lake. They are no less than 5 meters above the present low level of the lake, and all observers have been unanimous in the opinion that the whole area was once under water. The lower cultural deposits are uniformly lacustrine, resting on undisturbed lake marl. Marcano is not explicit in his description of structure; he records[10] that large lake boulders were found in a circle around the outer part of the mounds, resting on the marl and covered with humus. Among these stones, thickest at the circumference of their crude ring, the usual refuse of living quarters, broken animal bones, sherds, charcoal and ash were uncovered. Inside the ring of stones numbers of secondary burials in urns were encountered. This arrangement led Marcano to believe that the mounds were artificial tumuli, and that what apparently was rubbish from dwellings, was the remains of funeral feasts. Jahn also found stones at the periphery of the mounds but does not indicate their position as a low, rough wall. His description[11] emphasizes the fact that the lower parts of the mounds rest on lake marl and that they are capped with humus containing urn burials. He does not state whether the middle layers full of refuse were laid down in water but indicates that they were of clay and contained refuse. Jahn says,[12] in translation: "These tumuli . . . served as a base for the habitations of the ancient aborigines and contain a rich deposit of ornamental ceramics, stone tools and funerary urns, which, in my judgment, must contain the remains of thousands of Indians. Those sites, in former times exposed to the inundations of the Rio Aragua, afforded, by their mounds or tumuli, security for the houses of the aborigines and at the same time were accessible to the light craft in which they were accustomed to fish."

It was thus quite apparent to Jahn, who has made a long and comprehensive study of the lake and its fluctuations in level, that before the humus cap was laid down, the mounds were little islands on which the Indians lived.

It was also clear to Requena that the area had been inundated, and the discovery in many mounds of the remains of piles and moulds naturally suggested that pile-dwellings had been in use, and that the mounds had been built up as more stable and permanent house sites.[13]

This theory, unsupported by properly recorded evidence, was confirmed by Bennett. The following summary of mound structure, derived from Bennett's work,[14] is the clearest and most concise statement of the stratigraphy encountered at any of the mound groups, and, although other mounds may vary in detail, it is highly probable that general conditions are similar.

I. At the bottom white, limey marl, with shells, disturbed only by post holes — typical undisturbed.

II. Brownish, same as above, except for more weed mold. No burials; sherds and artifacts considered intrusive. The same stratum is also found in test cuts and river beds. It averages 50 cm. in thickness.

III. Black layer; an aggregation of sherds, shells, broken artifacts, black dirt, from 10 to 40 cm. thick. This is probably a lacustrine dwelling deposit, laid down under water for the following reasons:

(1) Topography: the low level of the land above the lake and the known fluctuations of the lake.

(2) The evenness with which this black stratum is superimposed on the brown stratum, with, however, some discrepancies.

(3) The absence of ash beds, built up fire places, hearths, storage holes and of any floor level.

(4) The mixture of small lake shells, not food shells, of the same species encountered in the undisturbed strata.

(5) The nature of the artifacts, broken, and lack of packing down.

(6) The absence of burials; a few isolated human bones were found.

(7) The absence of wooden tools, although these could have been preserved, as were stakes.

(8) Posts, post holes and one cross beam. Post holes start at the top of the black stratum

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[10] Marcano, 1889, p. 8.

[11] Von den Steinen, 1904, p. 104.

[12] Jahn, 1927, p. 221.

[13] Requena, 1932, pp. 247, 278.

[14] Bennett, 1937, pp. 79–83.

and extend into the undisturbed, never over the black. There were twenty-five holes in one trench, chiefly at the periphery of the mound, from 5 to 15 cm. in diameter. Some of these holes showed partially preserved piles; and some alignment was discernible.[15]

IV. Above the black stratum were a dozen beds of vari-colored clays, dirt and ash, 1.40 meters thick in the center of the mound. This appeared to Bennett as a period of actual mound construction, being largely sterile, containing no burials and few sherds. A yellow clay stratum over the vari-colored clays was also sterile, had a few intrusive burials and appeared obviously imported.

V. Humus, averaging about 50 cm. in thickness, some having possibly been imported, containing refuse, direct and urn burials.

Bennett also notes that another mound cut into by Castillo exhibited the same stratification. Thus, it was shown that the pile-dwelling theory of Requena had a basis in fact, and that with the recession of the water the house sites were built up artificially, possibly to guard against rainy season inundations. The humus cap, since it is full of refuse, probably does not represent a period when the site was unoccupied, although there is no evidence of floors or definite hearths in any part of it. This fact, however, may very probably be explained by the action of roots, which formed a network in all the humus strata I observed both in the mounds and on the Peninsula of La Cabrera. Their action in many cases has completely broken up large burial urns. With the exception of post holes in sub-humus mound strata, no traces of house structure have been found in the region.

## CAMBURITO

This group is situated on the left bank of the Rio Turmero (fig. 2), some 3 kilometers from the lake. It consists, according to Jahn,[16] of from fifty to sixty mounds; they were examined and some were excavated by him in 1903 and are now practically obliterated, due to agricultural work and looting. The general description of the La Mata group fits these as well. Urn burials are not confined to the mounds here, nor, indeed, do they appear to be at La Mata, but occur in large numbers in the humus of the flats. There are probably thousands of such burials still *in situ* all around the lake. The Camburito mounds are also mentioned by Oramas,[17] but in no detail.

## TOCORÓN

The Tocorón mounds and flat deposits are another part of the same mound complex of which La Mata and Camburito have been described. Tocorón is, like the two previously described localities, simply a subdivision of land, chiefly used for pasture, and is just south of La Mata between the Rio Tocorón and the Quebrada Paigua (fig. 2). The number of mounds is less than at La Mata or Camburito; just how many there may have been it is impossible to say. M. V. Marcano and Jahn made excavations here, as at La Mata, in the 'eighties, and no discrimination between the two groups, not more than 5 or 6 kilometers apart, is made in the description of mounds or specimens.[18] Ernst [19] also mentions a pipe from Tocorón.

No further work was done here to my knowledge until 1930, under the direction of Requena [20] and the field supervision of Castillo.

In 1933, C. Osgood excavated one of the Tocorón mounds.

## FURTHER SITES EAST OF THE LAKE

A number of localities east of the lake have produced archaeological material of the same type that has been found in the mound sites. At San Mateo (fig. 1), where I did a little work in 1934, Jahn told me he had found urn burials. Local reports tell of scattered finds all along the Aragua Valley in this direction, although in no such concentration as those nearer the lake.

Oramas, besides mentioning La Mata, also speaks of La Cuarta, La Quinta and La Huerfana,[21] all names of tiny hamlets or parts of estates on the low eastern shore, once under water. No stratigraphic details are given for any of these sites, but they are all flat, not mound, deposits. A number of urn burials were removed from these places.

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[15] Bennett, 1937, fig. 4.

[16] Jahn, 1927, p. 221.

[17] Oramas, 1917, p. 139.

[18] Marcano, 1889, p. 8.

[19] Ernst, 1890, p. 139.

[20] Requena, 1932, p. 302.

[21] Oramas, 1917, p. 139.

Marcano also mentions urn burials, uncovered near Santa Cruz,[22] and it is again reported locally that they are occasionally found southwest of Cagua.

## SITES TO THE SOUTH

Since the hills approach the lake more closely on the southern side, the low lying flats are of less extent than those to the east. Reports of remains are current all along the southern side, however; Requena [23] carried on his first excavations here, at a point 500 meters southeast of the Punta Palmita, which extends into the bay in the southeast corner of the lake (fig. 2). A number of secondary urn burials were unearthed. Many archaeological specimens have been found in the neighborhood of Güigüe, according to the people of the locality.

## SITES TO THE WEST

Continuing around the lake to the west, there is no lack of evidence that the aboriginal population surrounded the lake. At El Charral, on the Caño Charral which is a low hill site, many burials in exceedingly large urns have been removed, and I have seen others at the site exposed in the humus along paths and by road work. Here in 1933, Osgood also spent a short time excavating.

A short distance north of El Charral is the site of Cascabel,[24] with both direct and urn burials in the humus. This site has been used as a gravel pit, and the lake conglomerate under the humus, with shell and sand, is said to contain and cover burials, but I saw no evidence of this. Again local reports cite the presence of urn burials and other remains near El Cerrito, on the Rio Los Guayos.

## SITES TO THE NORTH

The best known site on the north side of the lake is that of Los Tamarindos on the Peninsula of La Cabrera, where Requena carried out excavations in 1930,[25] and where I worked in 1933 and 1934.[26] Objects from the peninsula are also mentioned by Von den Steinen [27] and Oramas.[28] No stratigraphic details are given, however, in any of these references.

Aside from on the peninsula, urn burials have been reported to me from Cura, Mariara and along the Rio Tapa-Tapa, one of the most important affluents of the lake (fig. 2).

## THE ISLANDS

Archaeological material has been noted by many people who have visited the islands of the lake, especially El Burro, where there are said to be caves which once contained pottery and artifacts. Von den Steinen [29] reports Jahn to have made some finds on Caiguire, near the southern shore.

It is thus evident that the whole valley was occupied in pre-Spanish times and that the population must have been a large one. There is still plenty of opportunity for archaeological work, but since this region has attracted so many excavators and produced so much material, the need for present investigation, in my opinion, lies outside the Lake Valencia region, where, although sites may be difficult to locate and may produce fewer specimens, results should be of great value to Venezuelan archaeology.

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[22] Marcano, 1889, p. 10.

[23] Requena, 1932, p. 112.

[24] Bennett, 1937, p. 75.

[25] Requena, 1932, pp. 272–276.

[26] Bennett (1937, p. 75) mentions this locality as Palmita or Araquata.

[27] Von den Steinen, 1904, p. 106.

[28] Oramas, 1917, p. 140.

[29] Von den Steinen, 1904, p. 101.

# EXCAVATIONS ON THE PENINSULA OF LA CABRERA

## TOPOGRAPHY

THE Peninsula of La Cabrera, where excavations were conducted in 1933 and 1934, extends into the lake on the north side, running nearly east and west (fig. 2). It represents a spur of the northern hills, and its peaks, indicated by the sketched in topography in fig. 3 and by pl. I, *1*, become progressively less high as the tongue of land extends into the lake. Although there is a considerable depression between the rise of land to the north and the peak farthest east on the peninsula, surmounted by an old fortress, a deep cut had to be made for the modern highway which leads from Maracay to Valencia. This pass was once a steep and narrow defile, a strategic point of great importance in the passage through the valley between Valencia and the east; two battles were fought for its possession in the War of Independence.

Like the other shores of the lake, the shores of the peninsula show evidences of past inundation. This is well illustrated in pl. I, *1*, where the corn fields on the north side, lying only a few meters above lake level, show that they have been covered by the lake in the past, probably several times. The present level is constantly fluctuating, and the Enseñada Cabrera, as well as the various other swampy bays and inlets, may be wholly covered with water or become marshes.

The various peaks along the peninsula, especially that farthest west, are outcrops of metamorphic rock which is the basic structure of the hills. The final peak, just southwest of the Los Tamarindos site, at Bocaina, is approximately 60 meters above lake level. This eminence marks the high point of what has been several times an island, the end of the peninsula having been cut off by a rise in water level. This is indicated by the lacustrine deposits at the neck which separate it from the eastern high ground, as well as by the fact that a rise of fifteen meters in lake level would transfer the Punta Araguatos end of the peninsula into an island and probably submerge the low island of Candamo completely. Humboldt,[1] at about 1800, observed that "La Cabrera now forms a peninsula; not sixty years ago it was a rocky island in the lake, the waters of which gradually diminish."

Further topographic evidence of the former water level lies in the presence of four wave cut terrace scarps [2] on the south side of the peninsula. These scarps are only apparent where they were cut into the metamorphic outcrops here and on some of the islands. They indicate that the lake at one time reached a height of approximately 15 meters above its present level, confirming the evidence afforded by water laid deposits not rocky enough to have retained terrace scarps. The prevailing winds blow from the south, producing the waves which have cut the terraces; on the north side in the sheltered lagoon and in the Enseñada Cabrera there are no such waves at most times, which, with the lack of outcrops on this side, has prevented the formation of scarps here. The terraces represent the last geological episode in the lake basin observable in the topography.

The whole peninsula, excepting where the lake has recently encroached, which includes the neck at Bocaina, is covered with a heavy growth of large trees and a tangle of undergrowth and has been little deforested. Since the trees, and especially the undergrowth, grow very rapidly in this tropical environment, it is quite likely that in the past the place presented a much more open aspect than it does today, for there were undoubtedly a far greater number of inhabitants in pre-Columbian times than the half dozen families occupying the Peninsula today.

## EVIDENCES OF ABORIGINAL OCCUPATION

In the Valley of Aragua there is such a wealth of archaeological material that the choice of a site which is to produce the greatest returns in information rather than speci-

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[1] Humboldt and Bonpland, 1819 vol. 4, p. 122.

[2] Berry, 1939, p. 553–556.

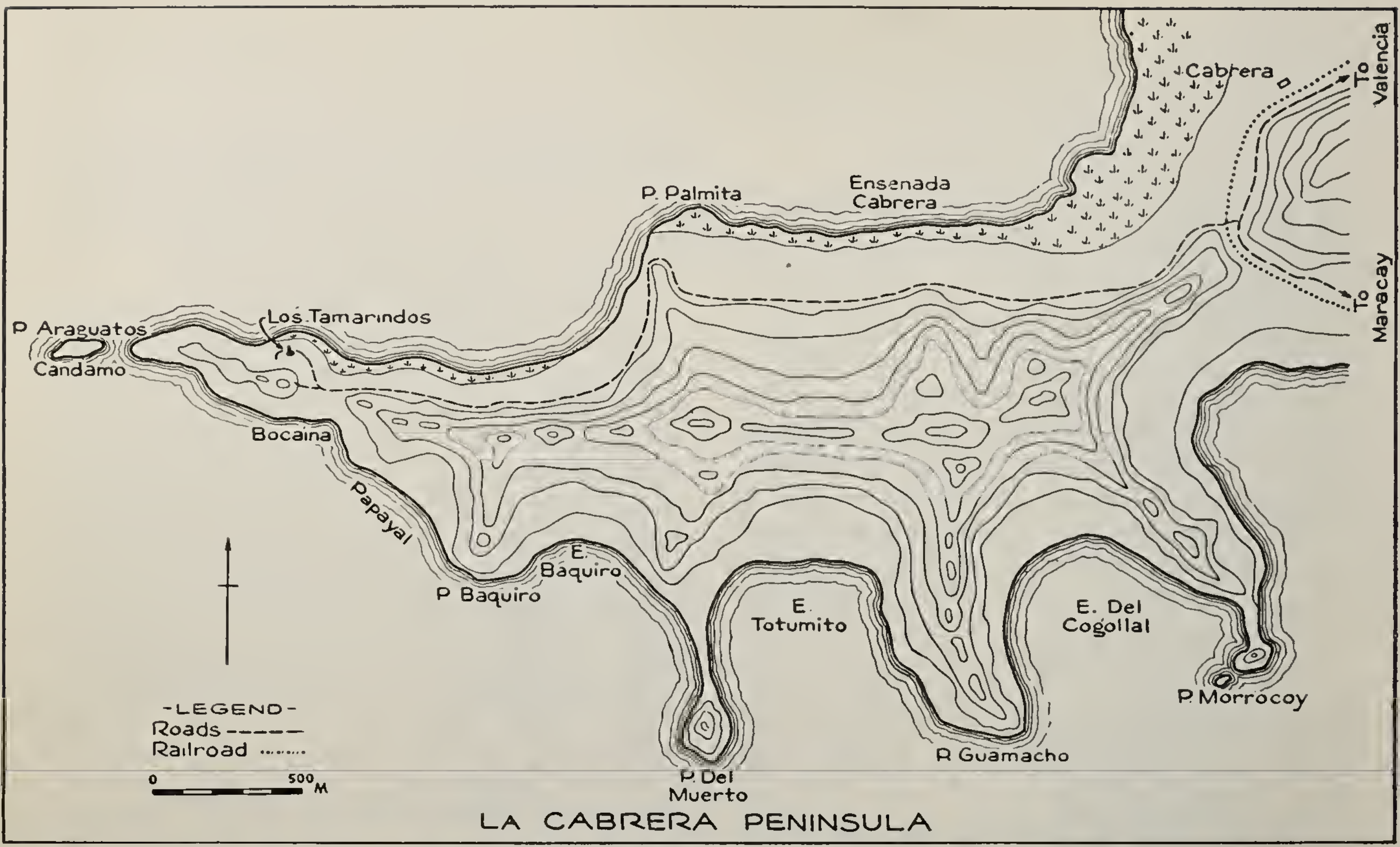

Fig. 3. La Cabrera Peninsula.

mens is difficult to make. Since the mound areas to the east had been the chief source of interest to previous workers, and the Peninsula of La Cabrera had been shown by Requena to be a fruitful locality and was easy of access by motor, it was decided to work there.

Aside from the quantities of sherds and stone artifacts which had been left lying about at the conclusion of Requena's work, it was apparent that the whole length of the Peninsula had been occupied by the Indians. All along the road, marked on fig. 3 by a broken line, there were fragments of pottery, and in several places urn burials had been exposed in the shallow cut made by the road makers. Beyond the Los Tamarindos site, where trees and undergrowth had not been removed, there were fewer surface evidences, but here, in the West and La Ceiba Trenches (fig. 4), many of the best preserved urn burials were found. Remains were said to exist all along the southern side, at Popayal, Baquiro, Totumito, Cogollal and Morrocoy. A small corn patch at Popayal exposed sherds and a few bones to verify the local report. It may be that at any of these spots there was as great a concentration of population as on the north side along the road and at Los Tamarindos, but it is probable from the abundance of material that the main concentration was at the latter site. In country of this sort, however, where the undergrowth grows up so quickly, surface indications are little apparent without a great deal of laborious bushing, and even then, as a rule, only as a result of erosion of the humus. In the time between September 1933, and July 1934, the entire previously bushed area had grown up to well over one's head. It is impossible in a limited time to ascertain, without digging, the exact extent of sites which lack mound or other more or less permanent structure.

## EXCAVATION

In 1930, under the direction of Requena, Castillo supervised an extensive series of excavations at Los Tamarindos, including the

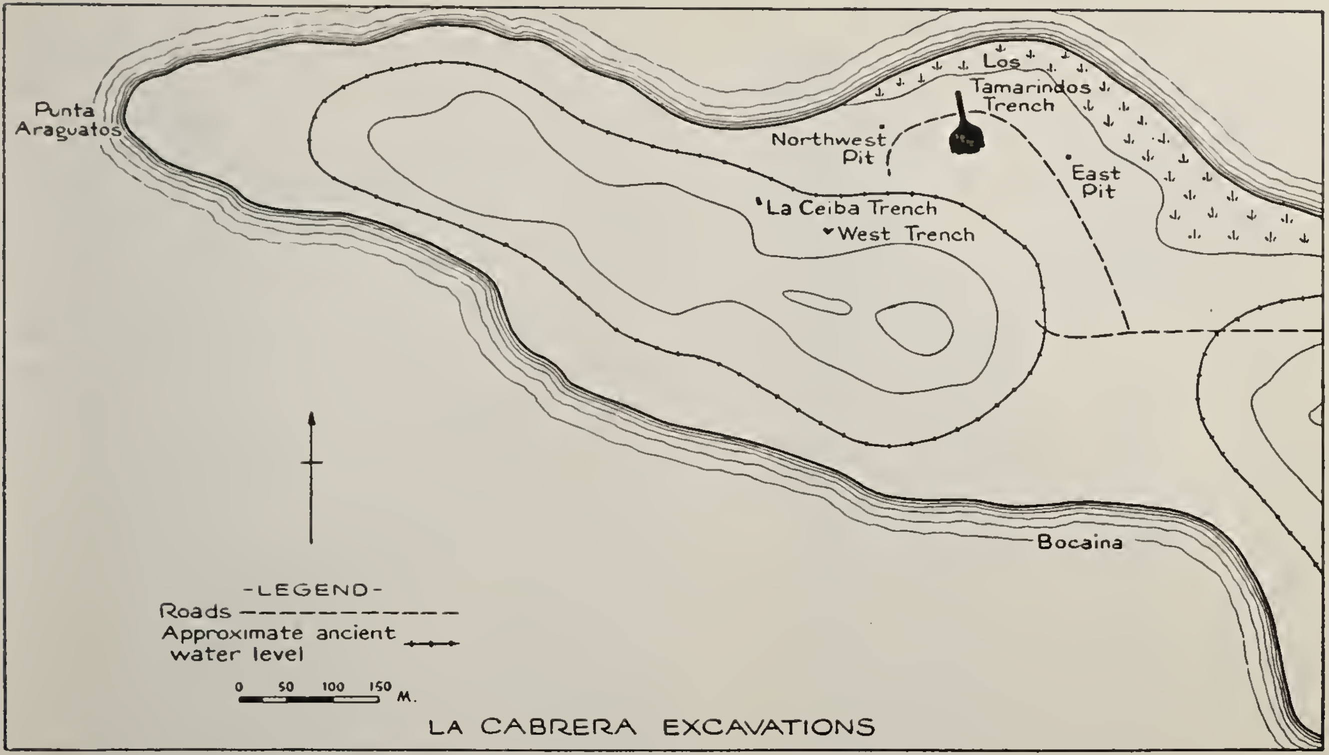

FIG. 4. La Cabrera excavations.

main pit (fig. 4) and a number of other smaller trenches and irregular pits. As can be seen in the profile of the Los Tamarindos site (fig. 6), the land slopes off gently from the height of the peninsula east of the final peak, and then drops more rapidly to the level of the lake. The pit, bridged over as indicated, was begun some seven meters above the level of the lake and extended south into the face of the bluff, bridged over, and widened out, all the while becoming deeper as it cut into the slope. It was unfortunate that the cut was not started at a point lower down and nearer the lake level, for this would probably have reached the bed rock or a sterile marl stratum, which never was attained in the main pit. Sterile layers were reached in a nearby test pit. An attempt was made to deepen the main pit in 1933 but served only to level off the bottom of the pit to the level of the wheelbarrow runway, which had been allowed to incline towards the lake. Work in the upper levels was so protracted that a further project for deepening the pit below the runway level was never undertaken.

Since it was obvious that cultural material was present in the deeper strata and that deep trench walls would not stand under rains on

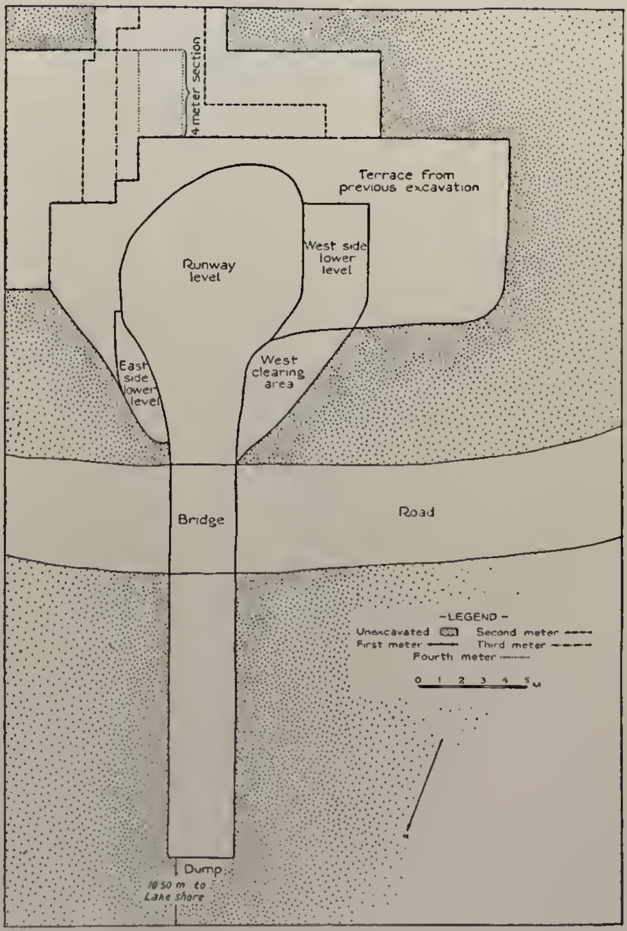

FIG. 5. Plan of Los Tamarindos Trench.

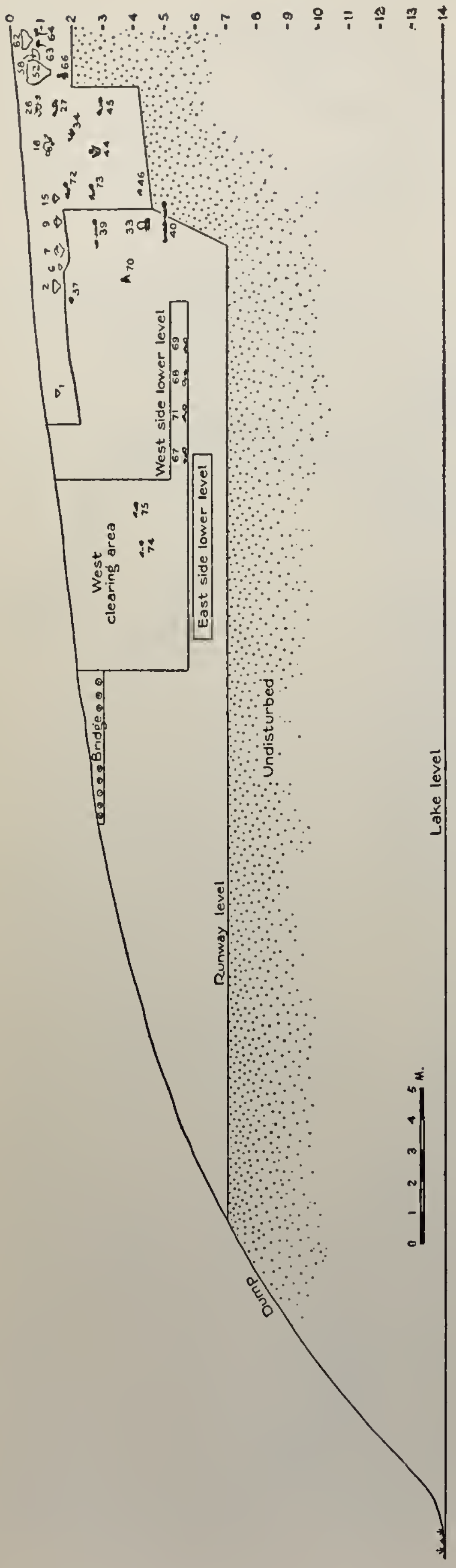

Fig. 6. Los Tamarindos Trench. Schematic profile showing excavation levels and burials.

account of their loose consistency, a terracing system was adopted. The upper level was to be cut back to the depth of a meter, with deeper cuts to follow. The amount of material encountered in the first meter was so great that time did not permit the full completion of this plan, however. Fig. 5 shows the extent of work to a final depth of 4 meters. When it became obvious that the progressive deepening of the cut from the surface would not reach the runway level, lower level samplings were taken from the areas marked on the plan (fig. 5) and schematic profile (fig. 6) as West Side Lower Level, East Side Lower Level and West Clearing Area. With the extension of the West Side Lower Level to the north, these cuts formed a single level, since the runway level had originally been reached at the bottom of the west side of the cut made by Castillo. Besides these samplings other finds, including burials, were occasionally made in the lower levels in the course of clearing. In 1934, besides some work in the upper two meters, most of the time was spent in increasing the East and West Lower Level cuts, to enlarge the collection of lower level material.

In connection with fig. 5, the plan of the entire Los Tamarindos cut, figs. 9, 10 and 11 show the extent of work in the first meter, second meter and lower levels respectively, as well as the relative positions of burials and associated material. Several burials were located west of Burial 26 in the first meter but were re-covered, lacking time for their proper exposure and removal.

Besides excavation in the main pit, E. W. Berry supervised two test pits (fig. 4) in 1933. These were of value in checking the stratigraphy of the larger cut.

To the west, close to the rise of the high peak, Berry also started the West Trench (fig. 4). The La Ceiba Trench (fig. 4) was cut in 1934 as a further check on the stratigraphy of the site; both were very productive. No detailed plan of the West Trench was made by Berry, and I had occasion to note only a few of the remains *in situ*.

## GEOLOGY AND LAKE LEVEL

Geologically the Lake Valencia Basin is a structural depression of late Tertiary age, with considerable deposits of Pliocene, Pleistocene and Recent age.[3] Physiographically, the wave cut terraces present on the south side of the peninsula and the islands appear quite old, and since they represent the latest obvious geologic episode in the region, they are important. Berry's opinion is that their age may be measured in hundreds, rather than in thousands, of years, however, but there is no means of measuring the time necessary to cut them.[4]

In the large excavation at Los Tamarindos (fig. 7) all strata encountered between the top of the bluff, 14 meters above the lake level at the south end of the pit, and the bottom of the excavation, 7 meters above the lake level, were of lacustrine origin, with the exception of the thick humus of terrestrial formation and possibly some sub-humus gravel. The lake-laid deposits consist in general of sands and gravel, diatomaceous earths, *Planorbis* marls, thin streaks of organic material, combined, in the lower levels especially, with many heavy rocks, at times in quite definite layers.

In more detail, the deposits for the upper four meters can be seen in fig. 8. This profile represents the greatest depth reached in continuous excavations from the surface at any point in the cut. The relative position of this cut is shown in fig. 5. Here the deposits encountered were as follows:

(1) From 15 to 20 cm. of late humus, containing very few sherds, all water worn. This represents the latest stratum, and the one which is still forming.

(2) From 25 to 30 cm. of yellowish sand, containing *Planorbis* shells and a large number of worn sherds, but no charcoal or ash. This sand represents a late rise of the lake; it is not present at the western side of the main pit and disappears on the north about 12 meters from the southern end of the excavation. It is not present in the West and La Ceiba Trenches, which are higher than the upper levels of the main pit. The fact that it is present only at the south end indicates that it marks the shore line of the latest regression of the lake.

(3) Black, somewhat sandy humus, of terrestrial origin, from 45 to 55 cm. thick at the south end, containing the bulk of the later cultural material, urn burials, sherds, refuse, etc. The humus stratum in general becomes less

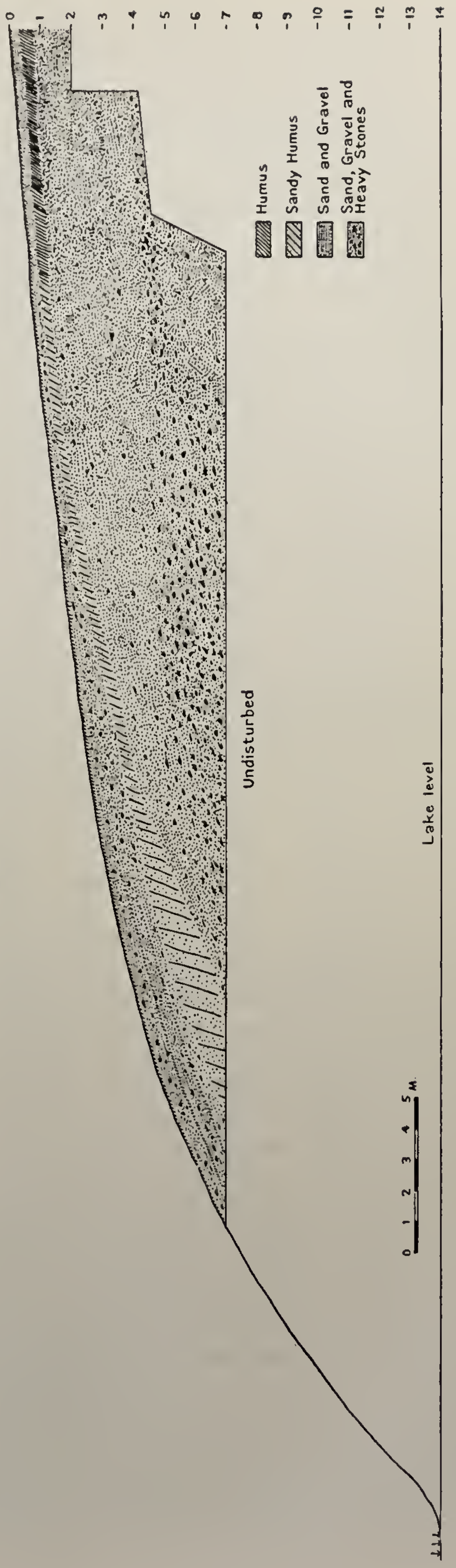

Fig. 7. Los Tamarindos Trench. Schematic geological profile.

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[3] Berry, 1939, p. 553.

[4] Berry, 1939, pp. 557-558.

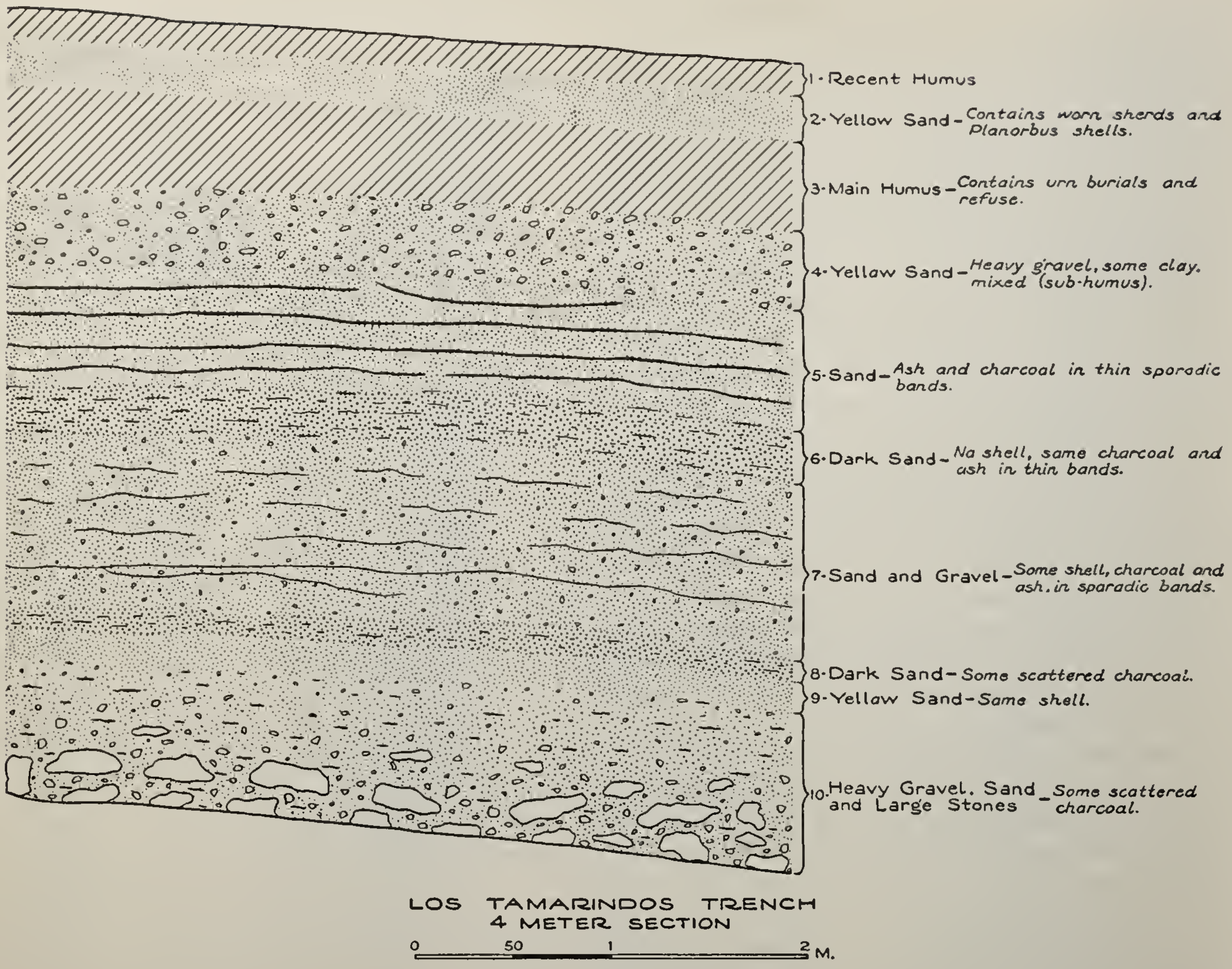
1-Recent Humus
2-Yellow Sand - Contains worn sherds and Planorbus shells.
3-Main Humus - Contains urn burials and refuse.
4-Yellow Sand - Heavy gravel, some clay, mixed (sub-humus).
5-Sand - Ash and charcoal in thin sporadic bands.
6-Dark Sand - No shell, some charcoal and ash in thin bands.
7-Sand and Gravel - Some shell, charcoal and ash, in sporadic bands.
8-Dark Sand - Some scattered charcoal.
9-Yellow Sand - Some shell.
10-Heavy Gravel, Sand and Large Stones - Some scattered charcoal.
LOS TAMARINDOS TRENCH
4 METER SECTION
0
50
1
2 M.

Fig. 8. Los Tamarindos Trench.

apparent to the north, since it grows thinner and is more mixed with sand, gravel and heavier material. This is probably due to the fact that as the lake receded slowly down the slope, the upper bluff was having humus deposited on it. The relative thickness and consistency of the whole stratum is indicated in fig. 7.

(4) Below the humus in this part of the cut all the deposits are lacustrine. Immediately under the humus, which is somewhat more sandy in its lower third, there occurs some 40 cm. of mixed yellow sand, gravel and clay. The humus rests on this material without a sharp line of demarcation between. It apparently represents a less shallow deposition than the upper sand (stratum 2), since it contains practically no *Planorbis* shells, a good indication of shallow deposition, or it may be partly alluvial. It was not determined how far south this stratum extended; a somewhat analogous, but more definitely alluvial, deposit underlies the West Trench and La Ceiba Trench humus, but these trenches are situated at a higher level.

(5) Below the mixed sub-humus gravel, sand and clay stratum, there appear some 60 cm. of stratified sand and gravel, containing some *Planorbis* shells. It also represents the first occurrence of water deposited charcoal and ash, in four thin, sporadic streaks. These streaks, as indicated, are not continuous; in certain parts there may be a thickness of 2 or 3 cm. of charcoal or ash, never both, in these bands. Between the thicker streaks of solid ash or charcoal neither may be present, but the streaks remain visible in the sand as dark lines. It seems probable that this sand, with its bands of ash and charcoal redistributed by water, must represent a beach with fire remains deposited in it as they floated apart and were segregated by the water.

(6) Continuing the stratified sand deposit, the sixth stratum consists of from 20 to 25 cm. of darker sand, lacking shells, but still containing charcoal, sporadically. This layer is probably either a beach full of weed mold or a deeper water deposit, lacking *Planorbis* shells.

(7) Under the dark sand stratum there lie some 90 cm. of stratified sand and gravel, with more larger stones towards the bottom. This layer is very much the same as no. 5. It is also marked by bands or streaks of organic material, especially charcoal and ash, discontinuous and very thin, with occasional pockets of either ash or charcoal, but in less homogeneous "lenses" and more mixed with sand than in no. 5. *Planorbis* shells occur here as well.

(8) The eighth stratum is a thin layer of dark sand, analagous to no. 6, 8 to 10 cm. thick, rather heavier in gravel, containing few *Planorbis* shells and with charcoal only sporadically distributed.

(9) This stratum consists of about 15 cm. of yellowish sand, full of *Planorbis* shells, and is analogous to no. 2, probably representing a shallow deposition and beach.

(10) The final stratum in the 4 meter trench is of heavy gravel, full of large stones, somewhat water worn but not to the extent of rounding and smoothing which would imply stream action. There is considerable charcoal in this layer, as indeed there is in nearly all the deposits of the site. Here it is not in stratified bands, however.

The tenth stratum from the top represents the upper part of the rocky layer which appears so clearly in fig. 7. Below the bottom of the 4 meter trench and the runway level, there lie three meters of material unexcavated by the author from the surface. Fig. 7, showing schematically the general geologic condition of the cut, indicates that the upper rock layer so clearly marked in pl. I, *2*, is not a continuous stratum, but that the whole lower level of the cut is full of these large stones. Pl. I, *2* indicates the mixed condition of the deposits in the deeper southern parts of the cut. The deposits of the East and West Side Lower Levels are in general similar to those in the 4 meter trench, with the exception of the fact that they are far more mixed with large rocks, and that there is more evidence, which is quite natural, of deeper water deposition in the shape of clay bands, from 5 to 8 cm. thick, which often thin out and become sandy, then give way altogether to beach sand in the space of a few meters. The stratification in general follows the slope of the bluff, with the lower levels being somewhat flatter.

Under the 4 meter trench and the heavier gravel and rocks which mark its base, the 3 meters of further deposit above the runway continue the stratified sand and gravel of the upper strata. All along the north wall of the cut, originally exposed by Castillo, there are bands of charcoal and ash, always segregated. A count of these shows that there are fourteen, including the eight exposed in the 4 meter trench. As has been said, they are not continuous, and the fourteen are not apparent in the side walls of the cut, where they were obliterated by the rocks or never deposited.

Conclusions in regard to the processes which went on in the deposition of this thick accumulation of material must be affected by the fact that cultural material is found throughout the entire deposit, with signs of intrusion over burials never indicative that they were put in more than about half a meter below the then existing surface. A large amount of fragmentary material, of course, shows no intrusion whatever. In sand and gravel strata most sherds are water worn, as in stratum no. 2 of the 4 meter trench; sherds among the heavy rocks are not water worn in most cases, and many objects were encountered in the thin clay bands of the lower levels, which seems to indicate that they were dropped into the water at some depth.

The clearest interpretation of the situation seems to be somewhat as follows. Over the culturally sterile shell marl which must exist under the culture bearing strata in the main cut, as it exists at 2.30 meters from the surface in the East Test Pit (fig. 4), there was deposited on the slope of Los Tamarindos a combination of talus material, including earth, gravel and many heavy rocks, derived from the height of land southwest of the slope, now well denuded by erosion and once probably considerably greater in extent. This must have been going on while the site was inhabited, since much cultural material is found among the boulders. The lake was probably rising and falling seasonally, as it does now, filling the interstices among the rocks with sand and gravel and producing some wear on them. As the level of the lake rose, the stratified sands and gravels were deposited, more evenly at the northern end of the cut, where the rocks were fewer. Lower on the slope most of the rocks found their level. As the lake rose, it still receded, however, from time to time, exposing beaches into which burials could be put. So much material in the water laid deposits, much of it quite unreworked, may mean that the people lived in pile houses over the water as they did at La Mata. The lake rose until it reached a point some 14 to 15 meters above its present level and then began its retreat. The recession allowed humus to form more thickly and uniformly at the top of the bluff than lower down, which accounts for the lack of continuity of the old humus and also for its thinness to the north. Furthermore, the continual seasonal rise and fall in the lake would rework all the upper deposits as the lake fell, accounting for their mixture. In the lower levels a consistent though fluctuating rise would have tended less to rework and cut into underlying deposits. During the time humus was forming in thin bands on the northern slope, the rise and fall and wash often made it more sandy than higher level humus. The lower slope, below the bridge, contains no urn burials, an indication that the people of later times lived higher up and probably did not approach the lake as closely as had their predecessors. It seems probable that at this time also the terrace scarps were being cut in the outcrops on the southern side of the peninsula and elsewhere on the shore. Reworking of deposits on the north side of the peninsula must have been minimal at this time, since the prevailing winds are from the south and east.

At the time of the Conquest the lake was much higher than it is now but obviously was not equal to its former level. It was then probably at a height of from five to seven meters above its present level, since it is reported to have been much nearer the city of Valencia than the 12 kilometers which separate it from Valencia today.[5] Apparently, the fall in level continued. It has been ascribed to deforestation and irrigation subsequent to the Conquest. However true this may be, since the level of the lake had been falling for many years before the Conquest, there must have been some more widespread climatic factor at work. Deforestation did go on in the mountains and especially in the valley, but it does not seem that this alone could have been wholly responsible for the continued drop of the water.

After the level of the lake had dropped to nearly its present level, there was a marked rise of water, certainly evidenced in the upper stratum of sand and *Planorbis* shells which overlies the thick humus on the Los Tamarindos bluff (stratum no. 2 of the 4 meter trench). In 1823 J. Boussingault, a French geographer and agronomist, visited Maracay. The inhabitants told him[6] that the lake had not only ceased to fall, but that it was beginning to rise markedly. Islands, which had appeared in 1795, disappeared, and fields were submerged. He says further that "the tongue of land of La Cabrera, at the north of the valley, had been so narrowed that the smallest rise of water inundated it completely, and a wind blowing continually from the northwest was sufficient to cover the road from Maracay to Valencia with water" (see fig. 2). This account proves that the level of the lake was very high somewhat over a century ago and probably explains the undisturbed upper sand stratum and its worn sherds.[7] Since that time further deforestation, irrigation, and probably a further natural decrease in rainfall have caused the lake to recede to its present level.[8] Presumably, the rise and recession were too rapid to obliterate seriously previously cut terrace scarps. Fluctuation is still very marked. In 1933, a very rainy year, the lake rose over 1.50 meters.[9] The Enseñada Cabrera was full of water, and practically no reeds showed above the water over most of its surface. In 1934, however, it was marshy for some distance from the shore, and the whole level was back to that of the early spring of 1933.

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[5] Jahn, 1940, p. 492; Oviedo y Baños, 1885, p. 226, states that the lake was a little more than half a league (perhaps some 3 kilometers) from Valencia when that city was founded in 1555.

[6] Boussingault, 1849, p. 6.

[7] This may never be absolutely determined, since there is no record of the exact height of the rise. However, the correlation of the latest consequential rise with the latest geological evidence of such a rise seems reasonable.

[8] See Crist and Chardon, 1941, for a discussion of the various causes of subsidence and past history of the lake.

[9] Jahn, 1940, p. 504.

The foregoing conclusions as to level and deposition are backed up by evidence from the other excavations on the peninsula. The Northwest Pit (fig. 4) was dug, under the direction of Berry, to a depth of 5 meters, without reaching a sterile stratum. At this point the pit had to be abandoned on account of the danger of falling rocks or a complete cave-in. In general the same conditions were encountered as in the Los Tamarindos cut. Upper humus was followed by gravel and sand, lower humus was present, but thin, streaky and sandy; at 1.50 meters from the surface large rocks were found, and the underlying stratified sand and gravel contained many of these, as in the great cut. Ash and charcoal, in segregated pockets, and cultural material occurred throughout the deposit. Since this pit is some meters below the level of the top of the bluff (its surface is approximately 10 meters above lake level), the deposits correspond in general to those in the great cut under the bridge; this part of the cut was very rocky, humus was thin, sandy and sporadic, as in the Northwest Pit. It seems probable that the same talus fill was deposited here and that the rising lake covered it with beach deposits. A later recession, at this height above lake level, produced the same humus conditions found on the southern slope of the bluff in the main cut.

Directly southwest of the Northwest Pit and west of the Los Tamarindos cut are the West and La Ceiba Trenches (fig. 4). The West Trench is situated some 15 meters from the base of the high peak which rises to a height of about 60 meters above lake level on the end of the peninsula and which must have been the source of the talus material found lower on the north slope. The West Trench deposit is high enough to have escaped lake action. Under 1.50 meters of humus there is heavy rock in the form of large boulders and some heavy gravel, which appears alluvial rather than lacustrine. The same type of deposit occurs in the La Ceiba Trench, which is even nearer the steep rise of the westernmost peak. Here are about 1.75 meters of humus, as in the West Trench, never covered by the late regression sand layer which did not extend to this high level. Below the humus, as in the West Trench, there are large blocks of rock, and some very coarse gravel in the cracks and depressions. It appears that these two trenches, lying close to the rise of land, rest nearly on the bed rock, with the very largest pieces which have been dislodged forming the practical bottom for pick and shovel digging. Some alluvial gravel, washed from the steep slope, covers them. It is coarse and angular, not in a definite stratum, but washed among the large slabs. Unbroken humus caps the whole, demonstrating that the lake never reached this level. Today the metamorphic outcrop is still in the process of disintegration; large slabs are encountered half buried in the surface humus, and the bare upper parts of the peak or ridge are continually exposed to the attacks of roots of shrubs which crack off large pieces as they widen the natural crevices in the rock.

One more pit remains to be discussed before conclusions, reached as a result of the study of the Los Tamarindos cut, can be further checked and correlated. The East Test Pit (fig. 4) provides the only immediately local evidence of the culturally sterile marl stratum encountered by Bennett and others at the sites on the eastern shore. This pit, cut into ground now about 7 meters above lake level, is situated on the eastern slope of the rise of land marked by the approximate contour line indicating that portion of the western end of the peninsula which was several times an island. At a depth of 2.30 meters a clayey lake marl was encountered, containing some *Planorbis* shells. This continued as far as the pit was dug, to a depth of about 4 meters. At the surface there was a thin humus, the present land surface. Under this, sand and gravel continued to a depth of 1.50 meters, where heavy rocks began to occur, becoming thicker, with sand and gravel washed among them. The rock and gravel stratum lies immediately on the marl, containing cultural material to as little as 5 cm. above the marl. This indicates that the rock slide was very extensive and probably indicates the former much greater extent of the western peak. The rock slide, followed by deposition of sand and gravel, is the same process noted in the Los Tamarindos cut and in the Northwest Pit, but here the receding waters have reworked the higher strata as they have the lower slopes at the great cut, with the result that old land surfaces have been obliterated and there is no thick humus such as occurs higher at Los Tamarindos; there appears to be some evidence in the sand and gravel that reworked humus soil is one of its components.

It seems to me that the evidence derived from the four lesser excavations has tended to confirm the interpretation of that afforded by the Los Tamarindos cut and the wave cut terraces. The following facts may now be cited with their probable interpretations as a summary of the processes which have gone on.

(1) Excavations at the highest levels (the West and La Ceiba Trenches) have produced no evidence of lake action but have shown that rock from the western peak has broken off and slid to lower levels. They have also shown that the undisturbed accumulation of humus has gone on where the lake has not encroached.

(2) Intermediate level work (Los Tamarindos cut) has shown that the slopes have been covered with rock slide material and that the lake has completed the fill as it rose. On the lower slopes, humus has not had a chance to accumulate thickly, due to the slow, fluctuating recession of the water.

(3) Low level work (test pits), in the Northwest Pit, has confirmed the intermediate work, and the East Pit has shown that a sterile marl is to be expected should the other cuts be deepened, excepting the West and La Ceiba Trenches. Unfortunately, the comparison of levels must remain on this basis, since all levels are inexact, none of them having been determined with the use of precise instruments.

It was postulated that the terraces on the south side of the peninsula must have been cut after the north slope had been filled with slide and lacustrine deposit. This explanation is the only one which fits the data, since the only alternative explanation would be that the terraces were formed prior to the Los Tamarindos filling, in which case they would have been obliterated by the slow rise necessary to produce the fill. Furthermore, the presence, in the Los Tamarindos deposits, of what appears to the archaeologist as material of no great antiquity, mitigates the possibility of very many thousands of years having been necessary for the fill to accumulate. This is, indeed, no reason why the fill should not have been relatively rapid. If the interpretation is correct, the terraces began to be cut when the lake began to recede and when the thick humus of the upper slope at Los Tamarindos began to be laid down. Thus, the terraces must post-date the lower level archaeological deposits.

In 1933 Berry maintained that the age represented by the lower level deposits and the terraces must have been very great, at least some thousands of years. At present he feels that there is no indication of great age and has reduced his estimate of the time necessary to cut the terraces from thousands of years to a little more than four centuries.[10] This estimate seems to me to be too short. It rests upon the assumption that the terraces were formed after the rise of the lake had deposited the upper sand stratum (stratum no. 2 of the 4 meter trench), and hence must be later than the humus urn burials. The urn burials are obviously late, but Berry assumes that they are post-Conquest on the basis of their association with bones of the dog and domestic cattle. That the former need not have been introduced by the Spaniards is apparent, and the few beef bones found were always in the superficial humus, never in association with undisturbed aboriginal burials or rubbish. Furthermore, Berry was not aware of the early nineteenth century rise in lake level reported by Boussingault, which may well have been responsible for the late sand stratum.

Thus, whether the terraces were formed before or after the humus and the late sand stratum were deposited, they and the lower level lacustrine and slide deposits must be relatively recent. Their age is perhaps more likely to be determined archaeologically than geologically, but at present no accurate estimate of age is possible.

## CULTURAL REMAINS

Each cut made on the peninsula yielded archaeological material. This consisted of burials, pot-sherds, stone, bone and shell artifacts and the bones of mammals, birds, reptiles and fishes. In the Los Tamarindos, West and La Ceiba Trenches, most of the finds were made in connection with burials. It cannot be true, however, that the La Cabrera remains, in general, represent simply a burial ground. In the geological description of the site it was stated that charcoal and ash occurred throughout the deposits, which, with the remains of animal bones, often in a broken and burned condition, naturally suggest a dwelling site. Bones did not occur in heavy accumulations which would indicate a constantly used refuse heap, but were of scattered occurrence. The fact that so much of the thickness of the beds at Los Tamarindos is lacustrine largely explains this fact. In the humus, relatively few animal bones were found in any of the three principal cuts.

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[10] Berry, 1939, pp. 556–558.

Pot-sherds represent the largest item of refuse. Broken pieces were found in large numbers in all parts of each trench, being relatively more numerous in the Los Tamarindos cut, followed by the test pits producing relatively less, but nevertheless a considerable number.

The signs of any sort of house remains are completely lacking to support the hypothesis that the inhabitants lived in the immediate vicinity. We know from Bennett's and Castillo's work at La Mata that houses constructed on piles were probably in use in early times on the lake's eastern shore. Post holes there were imbedded in a solid, clayey marl, well adapted to retain their impressions. At Los Tamarindos there were no indications of post holes in any of the lacustrine deposits. It is possible, but only theoretically so, that they may remain in a marl stratum under the sands and gravels, but since such a stratum was never reached, it is useless to speculate upon this point. In the seven meters of deposit between the runway and the top of the bluff, or at any point farther down the slope, north, in the sub-humus deposits, there are no traces of post holes. There is reason to believe that pile houses were in use, however. Firstly, the people must have lived very near the shore. This is inferred from the presence of burials and large numbers of pot-sherds in the beach formations and deeper water deposits, plus the amount of water-segregated ash and charcoal. Secondly, on account of the seasonal rise and fall of the water, houses on piles would have been much more satisfactory dwellings than houses built on or near enough to the beach to have accounted for the water-laid refuse. Beyond this, aside from the La Mata evidence, there is no proof of pile dwellings. One fact is assured: namely, that the earlier inhabitants lived over, or very close to, the water. Perhaps the loose consistency of the sand and gravel, often mixed with rock slide material, may account for the lack of post holes. It does not seem possible that a formation of this sort, subject to alternate wetting and drying, would hold post hole impressions very long after the disintegration of the wood. Furthermore, with the advance of the lake and the possibility of rock slides, there may have been continual shifting of houses, with possible removal of piles.

The humus also shows no signs of house remains, either in the shape of post holes, floors or hearths. This must be explicable either because this ground was used exclusively for burial, or because such signs have been completely obliterated. It is a fact that the upper slopes of the bluff and the land around the base of the western peak were full of urn burials of the later people. These had been removed in large numbers from the Los Tamarindos cut by Castillo, and also from the humus in many other shallow excavations over the entire area between the Los Tamarindos and La Ceiba Trenches. This indicates that the people must have placed their burials very close to their houses. It is not at all likely that they went very far to bury their dead, since the whole lake basin is full of such burials, especially in the places best suited for habitation. Since we may reasonably reject the possibility that the ground was exclusively a cemetery, obliteration must be postulated. This is not difficult to explain. Houses of perishable material in this region disintegrate very rapidly; nothing is left of them a few months after they are abandoned. This is a well known fact in tropical archaeology, and a modern example happened to be present on the peninsula. In 1933 a small house of poles and thatch was standing near the East Test Pit. This structure had been built entirely of local material, with lashings of vines. It was kept up at that time as a shelter for the workmen. In 1934, a year later, it had fallen in, the roof was gone completely, and nothing marked the spot where it had been except upon the closest examination. It is unlikely that any remnants of houses should survive in the humus soil, then, from pre-Columbian times. The roots of trees and bushes form a network throughout this ground and often penetrate the walls of heavy urns and other vessels. Floors, unless they had consisted of imported clays or sands, would not be discernible after such a lapse of time and under such conditions of alternate wet and dry periods and heavy vegetation.

## *BURIALS*

Before presenting a detailed description of burial types, a general summary of this important category of remains for the whole valley should prove helpful. By far the greater part of the material from La Cabrera Peninsula and from other sites has consisted of funerary furniture. All workers who have published their findings in the region mention burials, with an apparently fairly wide diversity of types, although they are seldom described in detail.

The commonest method of disposal of the dead, to be found both in the literature and in the ground, is secondary urn burial. This occurs at all the sites mentioned above in the section dealing with previous work in the valley. Marcano [11] states that urn burials were found in the centers of mounds, often propped up with stones, a feature not encountered by Bennett or myself. Often the urns were in rows, with a great deal of associated material, both inside and outside of the urns, in the shape of vessels, stone, shell and bone ornaments and tools. All the mound burials were of single individuals, secondarily buried, and, according to Marcano, all in exactly the same way, with the skull at the bottom, vault down, surrounded by small bones placed at random, often with the sacrum over the skull. The shorter long bones were placed next, with the longest leaning on the walls of the vessel, on both sides of the skull, in a fan-shaped arrangement. Near Santa Cruz, many of the urn burials were multiple, some containing as many as eight skulls. Marcano recognized this type of burial as secondary; there is no mention of primary burial in his work.

Jahn, working at Camburito and La Mata, found a number of urn burials,[12] including fifty in one mound, and estimated several hundred for several of the La Mata mounds. His description of the disposal of bones is not as exact as Marcano's but is essentially the same. The skull and long bones were at the bottom of the containing urns, and there was often a considerable amount of funeral furniture within and outside the vessels. Jahn also reported a unique burial, that of a small monkey, in an urn, with a pendant of shell at the neck. This, apparently, was a primary burial. There is no mention of primary burial in the account of Jahn's work, but there is of direct secondary burial, that is, not contained in a vessel.

Oramas, working in 1914, reported [13] that his findings agreed with those of Marcano and Jahn, although he states that he found no whole containing vessels, apparently no true urn burials at all. His description is obviously that of direct secondary burial. The skull was "included in the thoracic cavity," which rested on the pelvis, with remains of the spinal column, and with the long bones crossed on the sides. The bones of the hands and feet as well as ribs were scattered throughout the interstices left by the larger bones. Oramas felt that these burials might have been removed from another cemetery, but this does not seem likely, in view of the definite occurrence of secondary burials at other sites. Funeral furniture was sometimes present and sometimes absent. Besides direct secondary burials, Oramas also found several skeletons in what he describes as a squatting positon inclined forward, always covered by broken pieces of what had probably been large burial urns. These were probably direct primary burials, although they are not illustrated or further described.

Requena's work, under the direction of Castillo, produced several hundred burials, described in little detail.[14] Types include secondary urn burial, single and multiple direct primary burial, extended burial on the back and burial in squatting position. Funeral furniture was plentiful, including fish, bird and mammal bones, interpreted as food offerings for the dead. Direct primary burials were found in considerable numbers, apparently, and some, at least, were at a depth of 2 meters, under a layer of marl, and were regarded by Castillo as extremely old. Undoubtedly these 2 meter burials occurred in strata corresponding to one or both of the lower levels of Bennett's mound, where he found no burials.

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[11] Marcano, 1889, pp. 9–11.

[12] Von den Steinen, 1904, pp. 104 and 106.

[13] Oramas, 1917, p. 139.

[14] Requena, 1932, p. 114, pp. 268–302.

Bennett's burials are fully described in his paper[15] and represent the most useful local material for comparison with the La Cabrera burials. Fifty-seven burials in all were found in the "T"-shaped cut in a single mound, grouped about the center. Of these twenty-nine were in or under urns, twenty-seven direct and one on a platter. All the large urns contained secondary burials, as far as could be determined. Two were multiple, one containing seven skulls and odd bones. Only three (direct secondary burials) showed the neat arrangement described by other writers, with the skulls on top and long bones crossed at the sides. Five shallow urns contained primary child burials, a feature not mentioned by previous workers. Fifteen of the urn burials had mortuary offerings in them. Five direct secondary burials were found, and three primary child burials with bowl-urns inverted over them.

Stratigraphically the humus cap and the top of the underlying yellow clay of the mound structure contained all but five burials and include all types but the single platter burial. The yellow layer contained three intrusive urns, the black refuse layer one urn and the platter burial. In the humus there were twenty direct and twenty urn burials, but the top humus contained several more primary than urn burials. Of the direct primary burials, five were flexed, seven extended, the rest uncertain. Bennett states that these primary, direct, upper humus burials seem to be relatively more recent than other burials.

From the above it appears that no single method of disposal was universal at any given time, nor can it be demonstrated beyond any doubt that any particular method was even in vogue. If the primary burials are actually much later than the urn burials, which they do not greatly outnumber in the same upper humus, the conclusion that the latest inhabitants were more given to the direct primary method is strengthened, but there is no evidence that they are much later.

On La Cabrera Peninsula eighty-five burials were removed and noted, as well as some ten or twelve more taken from the West Trench which can be roughly classified. There is no record of the number or exact classification of those removed in earlier work by Castillo. Treating the method of disposal of the dead as a cultural trait, it seems more logical to base a classification on the treatment of the body before final disposal, that is, to make the primary categories of classification primary and secondary burial, rather than urn or direct burial, at least in the case of adults. Of the total of eighty-five from La Cabrera, thirty-two were primary, fifty-two secondary; there was a single cremation, which, although secondary burial, should be classified separately. Further subdivision of the two primary categories is based on disposal in the ground. Of the primary burials, twenty-seven were direct, with no covering vessels or slabs. Of these, nineteen were flexed, one was extended, one was in a squatting position and six were indeterminate, probably flexed. A second category of primary burials is that of direct burials with vessels or slabs placed over the head or whole skeleton; four of this class were found, three flexed, one extended; of these, only one had a slab covering. The final category of primary burial is that of primary urn burial. This method of disposal is confined, in the Valley of Aragua, to young children and probably may be linked with secondary urn burial. Although Bennett found ten child burials, all primary, five of them in shallow urns, I found only one definitely primary urn burial of a child, out of twelve single child urn burials. Whatever may be the actual percentage of primary and secondary child urn burials for the valley as a whole, there is no question of the virtual absence of adult primary urn burial, although many of the urns are of ample size for the reception of a fully grown individual of moderate or even large size.

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[15] Bennett, 1937, pp. 83–89.

The second basic category, secondary burial, may be conveniently sub-divided into five classes. Of the fifty-two secondary burials noted, twenty-eight were urn burials of single individuals; nine were multiple urn burials, seven containing two individuals, two containing three individuals; eight were direct secondary burials, with no covering of any sort, two of which were single skulls; six were direct single burials with covering vessels, which might be classified as inverted urn burials; and one was the direct multiple burial of a number of individuals with a covering vessel. The classification of the total may be summed up as follows:

| PRIMARY<br>Type | No. | % of Total Primary Burials |
|---|---|---|
| Direct, with no covering | 27 | 84.3% |
| Direct, with vessel or slab over skull or whole | 4 | 12.5% |
| Urn | 1 | 3.1% |
| Total Primary | 32 | |
| **SECONDARY** | | **% of Total Secondary Burials** |
| Direct, with no covering | 8 | 15.3% |
| Direct, single with covering vessel | 6 | 11.7% |
| Direct, multiple with covering vessel | 1 | 2.0% |
| Urn, single | 28 | 53.8% |
| Urn, multiple | 9 | 17.3% |
| Total Secondary | 52 | |
| **CREMATION** | | |
| 1 Burial | 1 | |
| Total Burials | 85 | |

No figure is given representing the percentage of primary or secondary burials relative to the total number of burials, since such a comparison would not be a valid expression of their relationship, owing to the fact that they are largely distinct stratigraphically. Besides the above, a number of secondary urn burials and several secondary direct burials were taken out of the West Trench.

Since most of the burials were secondary, assured determination of sex was often impossible. Table I shows the distribution of ages, sexes and skull deformation, as fully as could be determined from the bones, in connection with type of burial and mortuary offerings. This shows that there is no apparent correlation between method of burial and age or sex, except that primary urn burial was used only in the case of infants, as was also demonstrated by Bennett's findings.

Skull deformation is shown in table I only for males. There is reason to believe, however, that it was practiced for females as well. Marcano states[16] that it occurred in about half of his female series from the mound sites, as well as in about half of his male series.

Table II shows deformation in its relationship with burial type. It will be noted that in the two cases of deformation in connection with primary burial, a question mark has been appended, implying some doubt as to the condition.

Funeral furniture was present in many of the graves, taking the form of pottery vessels and figurines, as well as pottery discs and decorations, stone tools and ornaments, shell beads, pendants and unworked shell, bone and antler tools and beads, and in some cases very probably food offerings, in the shape of fish. Table II shows types of mortuary offerings in relation to burial types, table I to age and sex.

In the case of multiple burials in table I, funeral furniture has been assigned to each individual in the burial in cases where no distinction could be made as to which individual the vessels, beads, etc., had been intended for. This naturally increases the number of individuals with mortuary offerings in comparison with the number of burials with such offerings.

An analysis of the table data shows that of one hundred and two individuals in eighty-four burials, forty-eight were adults of indeterminate sex, fourteen were adult males, seven adult females, twenty-seven infants or young children, while only three adolescents and three sub-adults were found. This condition appears to be a normal and natural distribution of age and sex in such a sample, representing a range from babies to very old persons, but with most deaths occurring in adult life, few dying in youth after surviving childhood. As has been stated above, no safe conclusion can be drawn as to method of burial from the figures, except in the case of child primary urn burial.

[16] Marcano, 1889, p. 34.

Approximately 30% of all children had beads or decorations with them, while only about 15% of all adults had them. In the case of vessels only, 11% of all adults and 7% of all children were so equipped, but 26% of all adults had both vessels and beads or tools, while only 7% of all children had both types of furniture. This can be taken, irrespective of stratigraphic position, as the average probability for the distribution of mortuary offerings. Further percentages show that 55% of all adults had some sort of funeral furniture (other than food) with them, and that 44% of all children had funeral furniture. Thus the probability is somewhat greater that more adults were normally buried with funeral furniture, that they were more likely to have had vessels besides beads and tools put with them and that they were somewhat more likely to have been interred with vessels only, but that children were more likely to have been interred with beads alone.

In regard to type of burial and mortuary offerings, table II shows that of thirty-two primary burials, 6% had vessels only, 18% had beads or tools only, and 25% had both. Thus 50% of all primary burials had some sort of furniture with them. Of all secondary burials, 9% had vessels only, 25% had beads or tools only and 21% had both. Of all secondary burials 55% had some offerings, which is not enough more than the 50% of all primary burials to draw the conclusion that primary burials were less often equipped with funeral furniture than secondary burials. It is a fact, however, that primary burials were less richly furnished than the secondary type; this factor is taken into account in the final analysis of burials as a trait in the section headed Stratigraphic Conclusions (p. 81). The above figures are helpful only as raw data to be used after a fuller description of burials, when they can be classified culturally and assigned to their places in the various phases of Lake Valencia culture.

| Age & Sex | PRIMARY | | | | SECONDARY | | | | | | | | MORTUARY OFFERINGS | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Direct, with no covering. | Direct, with vessel or slab over skull or whole skeleton. | Urn. | *Total Primary.* | Direct, with no covering. | Direct, single, with covering. | Direct, multiple, with covering. | Urn, single. | Urn, multiple. | *Total Secondary.* | *Total Individuals of each Age & Sex.* | *Frontal Skull Deformation.* | Vessels (other than urns and covers). | Beads, Tools, etc. | Vessels plus Beads, Tools, etc. | Food. |
| Total Burials of Each Type | 27 | 4 | 1 | 32 | 8 | 6 | 1 | 28 | 9 | 52 | | .. | .. | .. | .. | .. |
| Infant | 5 | .. | 1 | 6 | 1 | 2 | 4 | 11 | 3 | 21 | 27 | .. | 2 | 8 | 2 | .. |
| Adolescent | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | 3 | 3 | .. | .. | .. | .. | .. |
| Sub-Adult ♂ | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. |
| Sub-Adult ♀ | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | .. | .. | .. | .. | .. |
| Sub-Adult (?) | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 1 | .. | .. | .. | .. | .. |
| Adult ♂ | 7 | 1 | .. | 8 | 3 | .. | .. | 2 | 1 | 6 | 14 | 2&3(?) | 1 | 3 | 5 | 1 |
| Adult ♀ | 3 | 2 | .. | 5 | .. | .. | .. | 2 | .. | 2 | 7 | .. | .. | 2 | 4 | .. |
| Adult (?) | 11 | 1 | .. | 12 | 4 | 4 | 4 | 10 | 14 | 36 | 48 | .. | 7 | 6 | 10 | 4 |
| | | | | | | | | | | | 102 | 2&3(?) | 10 | 19 | 21 | 5 |
| | | | | | | | | | | | | Total Individuals with Above Traits | | | | |

TABLE I

In order to provide a graphic summary of the stratigraphic relationship of burial types to each other, the diagram shown in fig. 12 was devised. This represents the seventy-five burials found in the Los Tamarindos Trench, since the West and La Ceiba Trenches are not comparable, having only a single culture bearing stratum of humus. The chart illustrates the relative number of each type found, the vertical distribution of each type, that is, the depth from the surface of each example, with that nearest the surface on the left, and that farthest from the surface on the right. It also shows, diagrammatically, the overlap of any type with another. Actual cases of superposition naturally cannot be expressed in a chart of this sort but may be noted in the detailed description of the burials. A glance at the chart will show that the trend of primary burials is away from the surface. Only three, of the two classes, direct with no covering and direct with covering, occur one meter or nearer to the surface, while secondary burial, direct and urn, of single and multiple type, tend to remain very much closer to the top. The two cases of direct secondary burial farthest to the right on the chart were single skulls and may have been fortuitous, rather than intended burials, but this could not be determined.

MORTUARY OFFERINGS

| Burial Types | Vessels (other than urns & covers) | Beads, Tools, etc. | Vessels plus Beads, Tools, etc. | Food | Frontal Skull Deformation | Total Burials of Each Type |
|---|---|---|---|---|---|---|
| PRIMARY | | | | | | |
| Direct, with no covering | .. | 6 | 5 | .. | 1(?) | 27 |
| Direct, with vessel or slab over skull or whole | 1 | .. | 3 | .. | 1(?) | 4 |
| Urn | 1 | .. | .. | .. | .. | 1 |
| TOTAL PRIMARY | 2 | 6 | 8 | .. | 2(?) | 32 |
| SECONDARY | | | | | | |
| Direct, with no covering | 3 | .. | 2 | .. | 1&1(?) | 8 |
| Direct, single, with covering | .. | .. | 1 | .. | .. | 6 |
| Direct, multiple, with covering | .. | .. | .. | .. | .. | 1 |
| Urn, single | 5 | 9 | 6 | 3 | 1 | 28 |
| Urn, multiple | .. | 4 | 2 | 1 | .. | 9 |
| TOTAL SECONDARY | 5 | 13 | 11 | 4 | 2&1(?) | 52 |
| TOTAL BURIALS | 7 | 19 | 19 | 4 | 2&3(?) | 84 |

TABLE II

Comparison of fig. 12 with the geological profile (fig. 7) shows that secondary burials, both urn and direct, occur chiefly in the lower humus, or are slightly intruded into the subhumus gravel. While no example of primary burial actually occurred in the humus, several were superimposed in the ground over urn burials or were directly associated with typical humus or Valencia Red ware. The final analysis of burial methods as a cultural trait is presented in connection with all cultural material after its description and classification, under the heading Stratigraphic Conclusions (p. 81).

The section which follows is intended to deal with the burials in more detail. They are treated by categories, starting with secondary burial, since this is the most common type, and the first to be encountered by an excavator on La Cabrera Peninsula. Brief descriptions and drawings are included in enough cases to describe the full range of types and to illustrate the lack of uniformity in the arrangement of secondary burials here, in accord with Bennett's findings, but less so in comparison with earlier writers whose descriptions of the neat arrangement of bones in urns according to plan seems to be misleading. Neat arrangement at La Cabrera and in Bennett's mound was unusual, rather than typical.

## *SECONDARY BURIALS*

Secondary burial may be defined as a method of disposal of the dead subsequent to total or partial disarticulation of the skeleton. In the Lake Valencia region it is the most common type of burial, in its various forms, representing the most usual method employed by later inhabitants. Of the La Cabrera burials, fifty-two of the eighty-five removed were secondary, not including the single case of cremation, which may also be considered a variation of the same method.

La Cabrera secondary burials exhibit a range from practically complete representation of the body in disarticulated condition to cases where single bones alone, or the merest handful of scraps, serve to represent the dead. The bones present no evidence as to the treatment of the body before final interment, but it is quite obvious that this treatment varied considerably. In some cases partial articulation was present; in many burials sections of the vertebrae were found articulated; mandibles were often in place; a few skulls, as at San Mateo also, had the atlas and axis in articulation; hands were sometimes complete; and in one case (Burial 32) a single articulated leg formed the greater part of the burial. From these varying conditions it seems probable that bodies were exposed or buried for a period of time and that some of them were allowed to deteriorate sufficiently to obtain a completely disarticulated skeleton, while others were still fresh enough to allow ligaments and cartilage to preserve some articulation. There is no evidence that the bones were scraped or cleaned, or that decapitation was practiced in the cases of single or multiple skull burial.

In the humus stratum of the Los Tamarindos, West and La Ceiba Trenches, free bones were found from time to time, in connection with nothing recognizable as a burial. These bones probably represent casually dropped parts of secondary burials, lost in the process of placing disarticulated bodies into urns or direct burials. This may be the more likely when it is remembered that in many South American tribes funerals are accompanied by drinking bouts and that under such circumstances the loss of a few bones would scarcely be noticed.

No other generalizations in regard to secondary burials can safely be made, except to state that the absence or presence of funeral furniture or its abundance appears to have no significance in relation to the various sub-types of the secondary method.

**Direct, with No Covering.** This group of eight burials represents 15.3% of the secondary burials. They are numbers 12, 21, 25, 26 and 32 of fig. 9, showing the distribution of burials in the first meter at Los Tamarindos, and numbers 24, 37 and 56 of fig. 10, showing those of the second meter. None of this type occurred in the La Ceiba Trench, and although several were reported by Berry from the West Trench, no record of their number was kept. There is no reason to fear, however, that the percentages of burial types given in the summary of the preceding section would be changed significantly by the absence of this data, since the number of burials in the West Trench included all secondary types. It may be well to repeat that the upper stratum of sand (stratum no. 2, fig. 8) shows no signs of the intrusion of burials into the underlying humus, so that no mention of this stratum is necessary in describing humus burials.[17]

Burial 12. Lower humus. A few child's bones; no pottery. Simplest type of secondary burial.

Burials 21, 24, 25. (Fig. 13, *1*, *2*.) Lower humus. Adults. Closely associated with urn burials 22 and 23. Burial 24 apparently first in ground, underlying 21 and 22; 23 overlain by 25, but in direct contact with it. All may have been interred at the same time, since there is little earth between any of them.

Burial 26. (Fig. 16, *1*.) Humus. Adult bones partially covered by broken urn.

Burial 32. (Fig. 16, *2*.) Lower humus. Single articulated right leg and other bones, probably adult male. Probably interred after Burial 27. Unique type of secondary burial.

Burials 37 and 38. (Figs. 6 and 10.) Deepest secondary burials of any kind shown in fig. 12. Both in gravels below humus. Possibly not intentional burials since they are single adult skulls; Burial 38 especially may represent part of a washed out primary burial.

**Direct, Single, with Covering Vessels.** This group of six burials, or 11.7% of the total number of secondary burials, consists of Burials 16, 30, 54, 55, 56 and 61. The relative positions of Burials 16, 54 and 55 may be seen in fig. 9; those of Burials 30, 56 and 65 in fig. 10, plans of the first and second meters of excavation. The separation of this type of secondary disposal from urn burial is less truly significant, probably, than the separation of the preceding category, direct secondary burial with no covering, since the covered direct secondary method is merely a reversal of the usual urn burial and might be aptly termed "inverted urn" burial. It was found in most cases closely associated with urn burial.

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[17] The detailed description of burials has been greatly reduced. Full details are on file at the Peabody Museum of Archaeology and Ethnology, Harvard University.

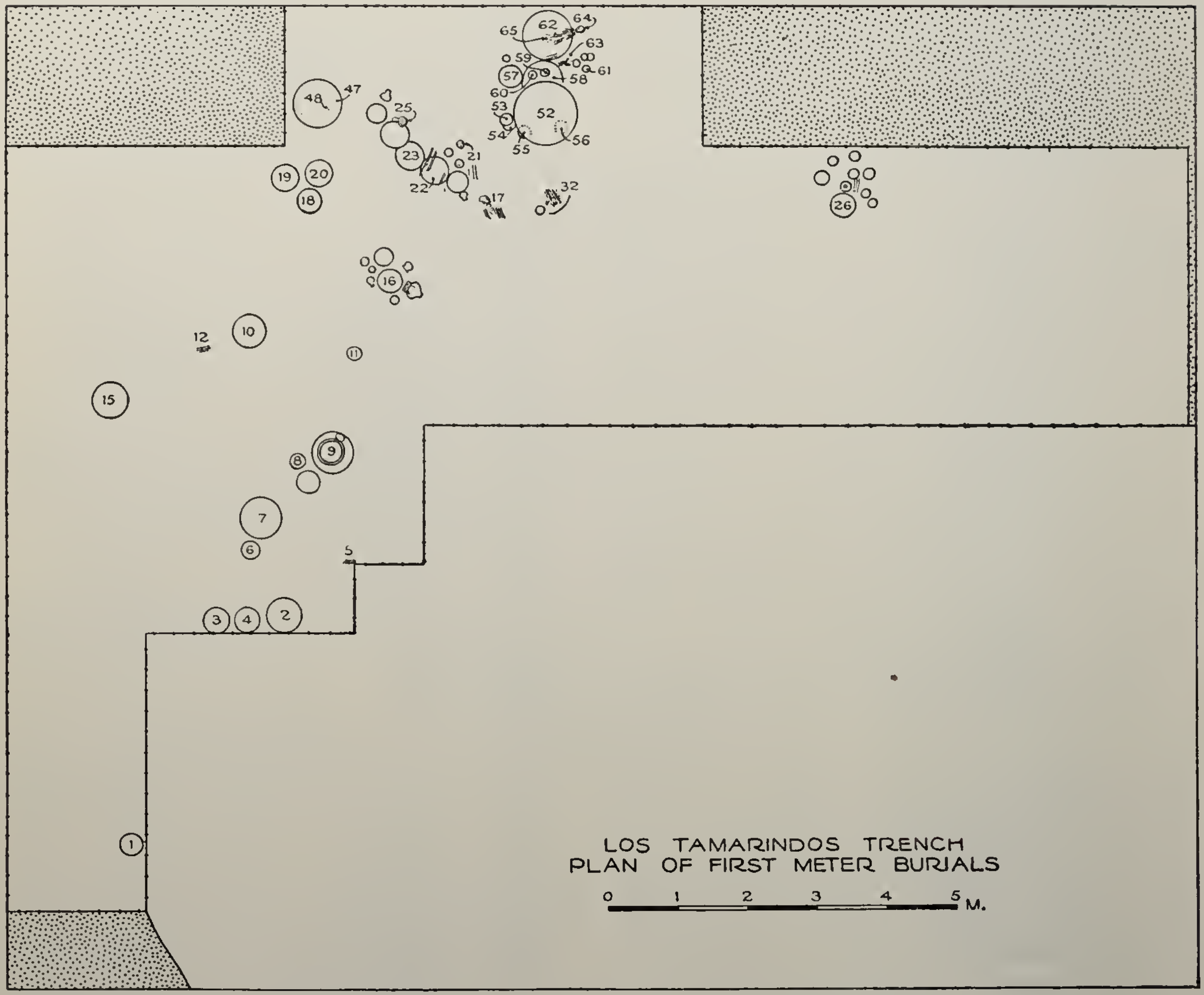

FIG. 9. Los Tamarindos Trench, plan of first meter burials.

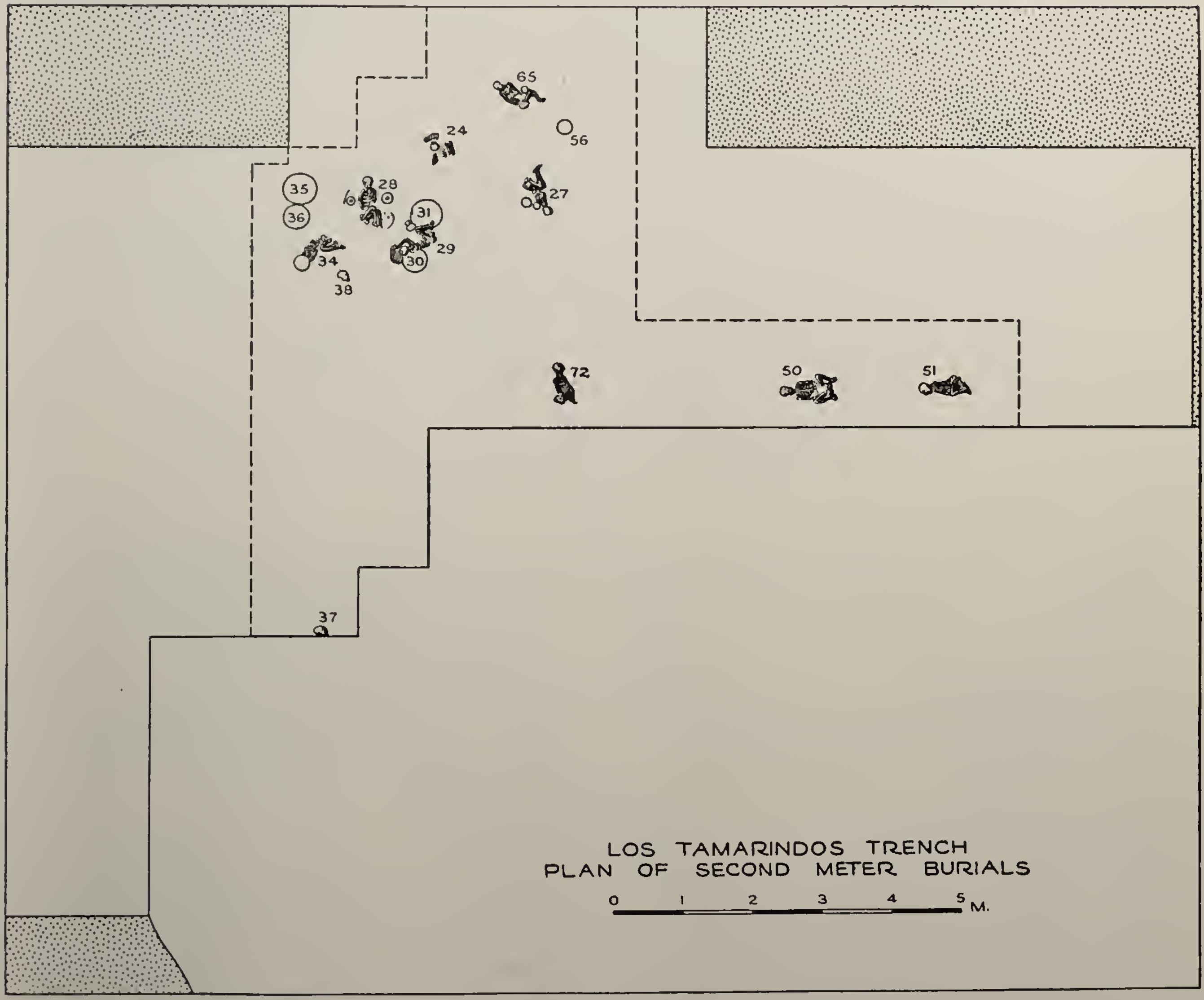

FIG. 10. Los Tamarindos Trench, plan of second meter burials.

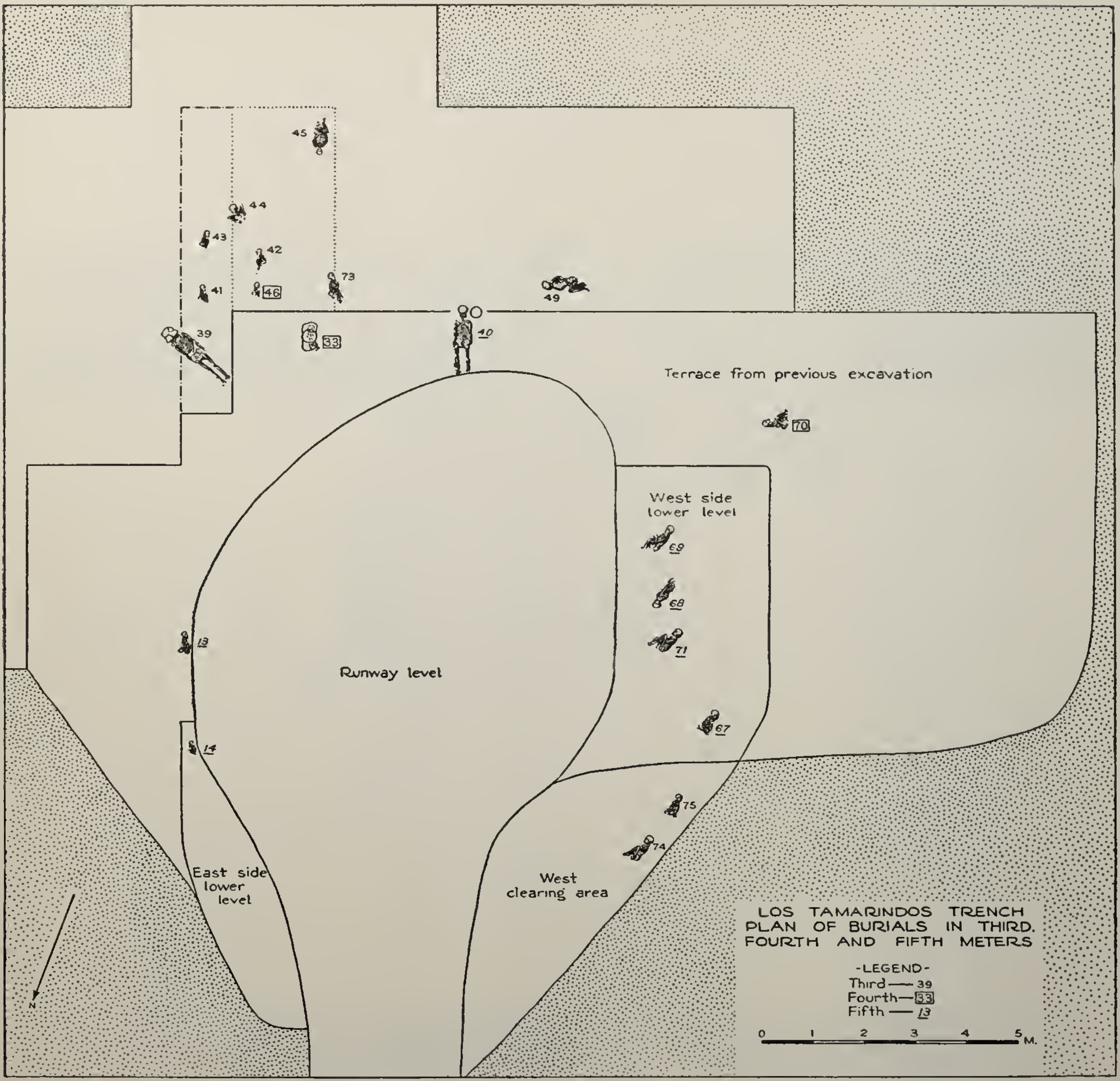

Fig. 11. Los Tamarindos Trench, plan of burials in third, fourth and fifth meters.

Burial 16. Humus, extending into sub-humus gravel. Adult. Much associated ware broken before interment. Differs from typical burial only in lack of containing vessel.

Burial 30. Top of sub-humus gravel. Incomplete infant. Probably buried at same time as Burials 29 and 31, all buried before Burial 16.

Burials 54, 55, 56, 61. (Figs. 13, *3*; 14, *1*, *2*.) Humus. Part of largest group in Los Tamarindos Trench. All adult but 61, a young child.

### Direct, Multiple, with Covering Vessel.

West Trench, Burial 3. This burial, perhaps scarcely deserving inclusion in a separate category, was not examined by the author. It was removed and described by Berry as a group of eight individuals, four adults and four children, disposed secondarily, under a very large urn, which was, however, right side up as it lay over them. This extraordinary condition was unique. Apparently, the bones were separated into individual groups in a rather haphazard fashion, so that there was a considerable mixture of the bones of the various individuals. West Trench Burial 3 should be considered separately partly on account of the poor nature of the record, and partly because it was the only example of multiple direct secondary burial encountered at the site, and, as far as I can determine, the only one of this exact type recorded from the Lake Valencia region.

**Urn, Single.** The twenty-eight secondary burials of single individuals excavated and re-

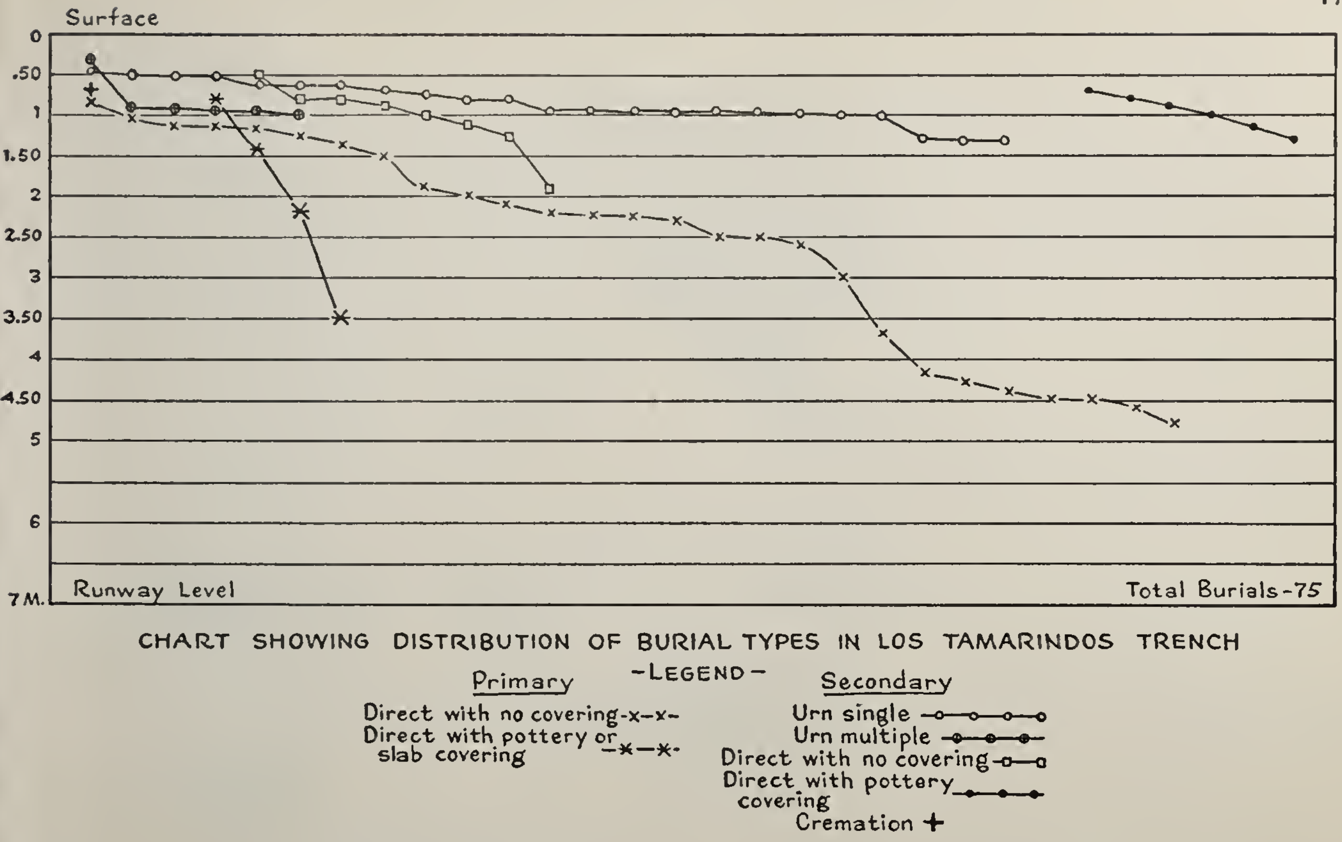

Fig. 12. Chart showing distribution of burial types in Los Tamarindos Trench.

corded on La Cabrera Peninsula form the largest group of any single type of interment. The figure is conservative, since an unrecorded number of such burials were removed by Berry in 1933 from the West Trench; on a percentage basis the type occurs over three times as often as the next most common class of secondary burial, that of more than one individual in an urn. Single urn burials comprise 53.8% of the total of all secondary burials and occur primarily in the humus of the first meter. Burials numbered 1, 2, 3, 4, 7, 8, 11, 15, 18, 19, 22, 23, 47, 52, 53, 57, 58, 59, 60 and 65 of fig. 9, showing the distribution of burials in the first meter, are of this type. Those numbered 31, 35 and 36 of fig. 10 show the relatively much less common occurrence of the same class in the second meter; fig. 12 shows that the lowest urn burials of a single individual were found at a depth of 1.30 meters; these were in the sub-humus gravel and had been so placed through the humus stratum. Fig. 16, 7 shows the single recorded burial of this type from the West Trench, and Burials 1, 2, 3 and 4 of the La Ceiba Trench group (figs. 15, *upper* and 15, *lower*) are included in the same category.

Burial 1. (Figs. 6, 9.) Humus. Infant, fragmentary containing bowl.

Burial 2. (Fig. 16, *2*.) Humus. Adult male. Shows neater arrangement than any other urn burial from this site. Urn is lower half of large vessel, with rim roughly smoothed.

Burials 3, 4. (Fig. 9.) Lower humus. Adolescents, contained in old and broken urns. No mortuary offerings.

Burial 7. (Fig. 9.) Lower humus. Adult, in broken bowl-urn contained in broken larger jar-urn; covered by broken platter and four broken bowl-urns. Fish bones.

Burial 8. (Fig. 9.) Lower humus. Sub-adult, in basal portion of large jar-urn.

Burial 11. (Fig. 9.) Lower humus. Adult bone scraps and teeth in small jar, incomplete.

Burial 15. (Fig. 9.) Lower humus. Adult male in incomplete jar-urn, covered by part of platter and inverted bowl-urn. Fish bones.

Burial 18. (Fig. 9.) Lower humus. Adult female in bowl-urn. Shell pendants.

Burial 19. (Fig. 9; pl. I, *6*.) Lower humus. Infant, secondarily disposed in bowl-urn with inverted bowl as cover.

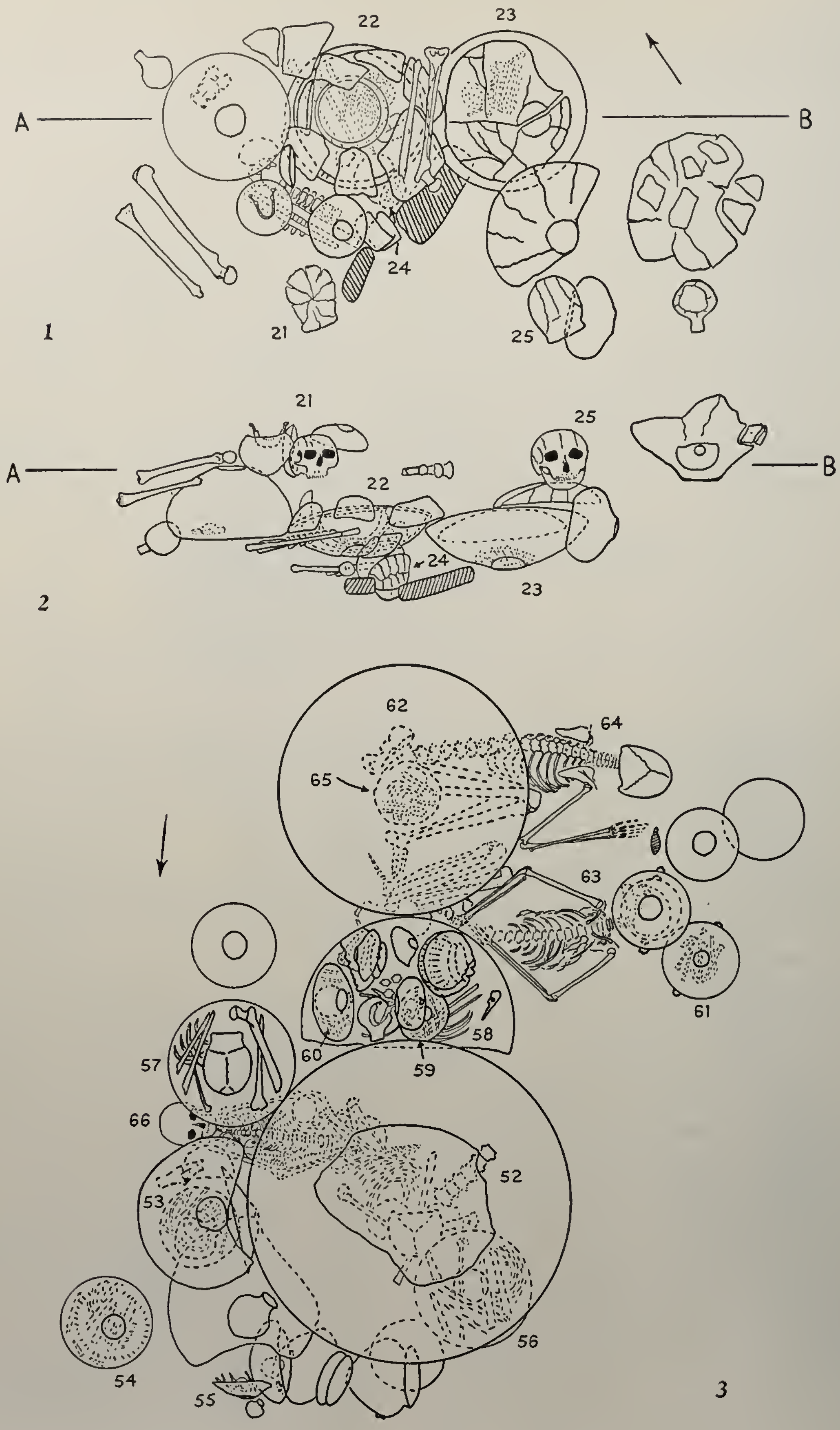

Fig. 13. Los Tamarindos Burials: *1*, *2*, Burials 21–25, plan and lateral view from south; *3*, Burials 52–66, plan. 1/20.

Burial 22. (Figs. 13, *1*; 13, *2*.) Lower humus. Infant in bowl-urn with another inside, right side up, with associated smaller vessels, figurine and necklace. Partial cover of large sherds.

Burial 23. (Figs. 13, *1*; 13, *2*.) Lower humus. Infant in bowl-urn with incomplete inverted cover of same shape.

Burial 47. (Fig. 16, *5*.) Lower humus. Aged adult, in incomplete urn.

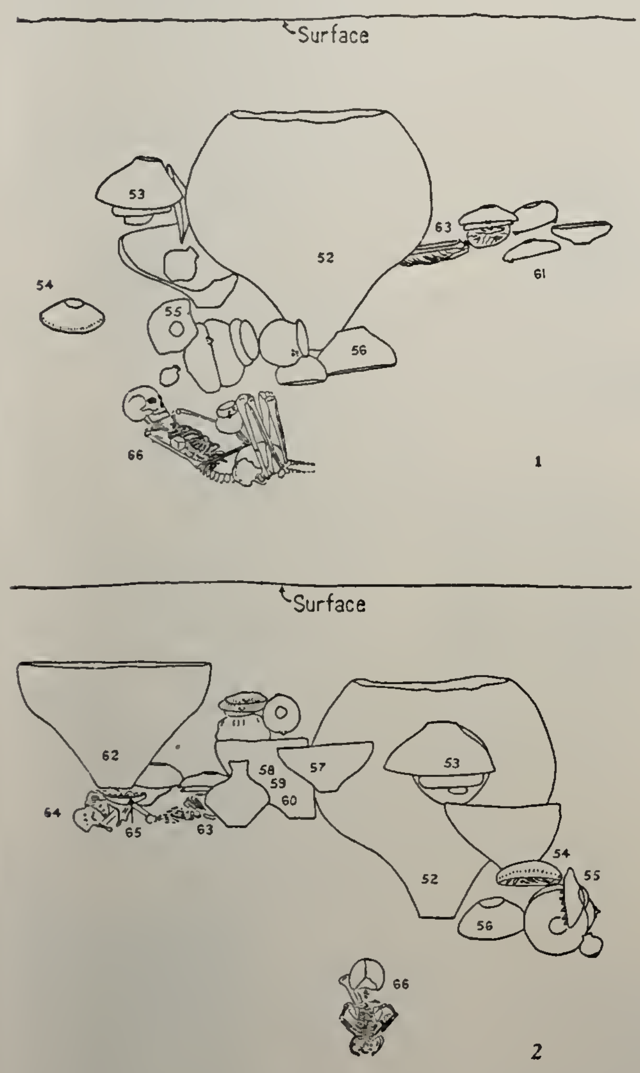

Fig. 14. Los Tamarindos Burials 52–66: *1*, lateral view from north; *2*, lateral view from east. ⅟20.

Burials 52, 53, 57, 58, 59, 60, 65. (Figs. 13, *3*; 14, *1*; 14, *2*.) Humus, with lower part of 52 extending into sub-humus gravels. 52 adult. Some fish bones, 53, infant. 57, probably adult male. 58, 59, 60, all in incomplete large urn, 58 in this vessel probably adult male; 59 and 60 infants in smaller vessels. 65, infant bones in large sherd.

Burial 31. (Fig. 10; pl. I, 7.) Sub-humus gravel, intruded through humus. Infant in bowl-urn with inverted covering bowls.

Burial 35. (Fig. 10; pl. I, *3*.) Sub-humus gravel, intruded through humus. Infant in bowl-urn.

Burial 36. (Fig. 10.) Sub-humus gravel, intruded through humus. Infant in bowl-urn.

West Trench Burial 4. (Fig. 16, 7.) Only West Trench single secondary burial personally recorded; a number of others were found here by Berry. Adult bone scraps in jar-urn with upright covering bowl containing white pebble.

La Ceiba Trench Burials 1, 2, 3, 4. (Figs. 15, *upper*; 15, *lower*.)

1. Adult scraps.
2. Single humerus, probably adult female, in very large incomplete urn.
3. Skull of young adult male in incomplete urn.
4. Adult in very large urn. One animal and one human figurine.

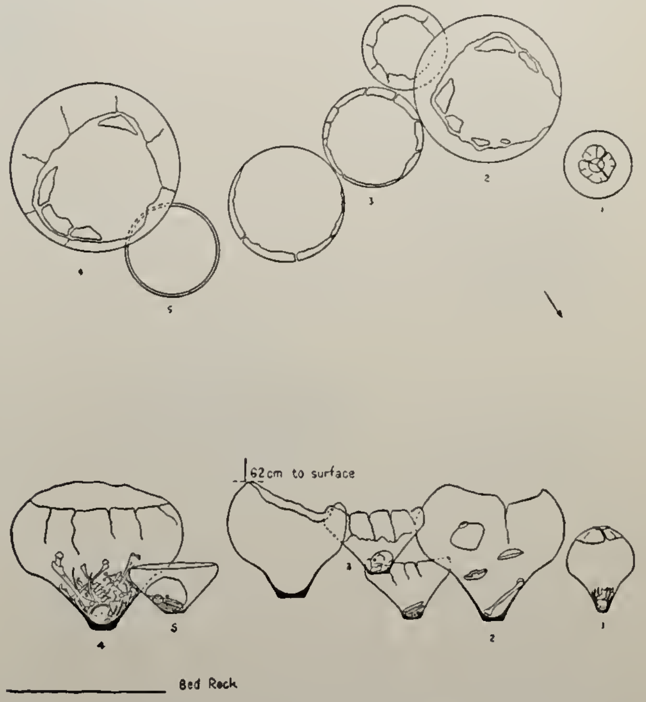

Fig. 15. La Ceiba Trench Burials: *upper*, plan; *lower*, lateral view from north showing interiors of urns. ⅟20.

**Urn, multiple.** Secondary urn burials of more than a single individual were found in nine cases on the Peninsula of La Cabrera. They were, for the Los Tamarindos Trench, numbers 6, 9, 10, 20, 48 and 62, all in the first meter (fig. 9). Those in the West Trench were numbers 1, 2 and 5. These nine represent 17.3% of the total number of secondary burials, in contrast to single secondary urn burials which made up 53.8% of the total number. Multiple secondary urn burial occurred in only one more case than the direct secondary type with no covering, and in three more cases than the

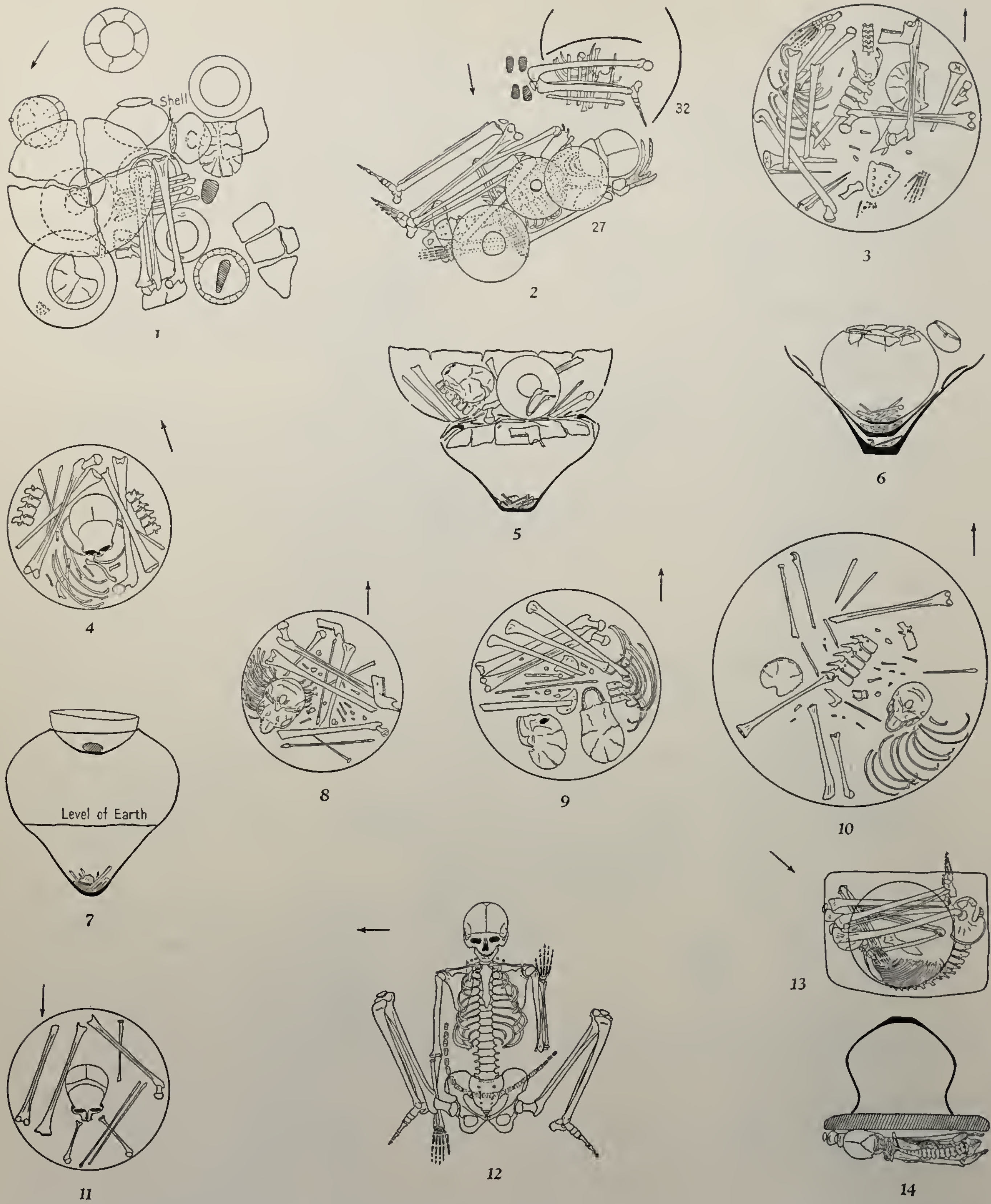

Fig. 16. Los Tamarindos, West Trench and San Mateo Burials: *1*, Los Tamarindos Burial 26, plan; *2*, Los Tamarindos Burials 27 and 32, plan; *3*, Los Tamarindos Burial 62, plan; *4*, Los Tamarindos Burial 2, plan; *5*, Los Tamarindos Burials 47 and 48, lateral view showing interiors of urns; *6*, Los Tamarindos Burial 9, lateral view showing interior of urns; 7, West Trench Burial 4, lateral view showing interior of urn; *8*, West Trench Burial 1, plan; *9*, West Trench Burial 2, plan; *10*, *11*, San Mateo Burials 1 and 2, plan; *12*, Los Tamarindos Burial 50, plan; *13*, *14*, Los Tamarindos Burial 33, plan and lateral view. All 1/20.

"inverted" urn type, which makes all three categories roughly comparable in their relationship to the more usual urn burial of single individuals. The single case of multiple burial under a covering must be considered aberrant.

The multiple type of disposal in urns does not differ in general from the single type; they are probably more similar in every way than any other two methods in the secondary category. Together they form 71.1% of all secondary burials and are considered separately for the sake of establishing a workable classification of burial types. As a result of this similarity, there is a marked likeness between the descriptions which follow and those which have preceded. Cases in the Los Tamarindos Trench are described first.

Burial 6. (Figs. 6, 9.) Lower humus. Aged and mature adult bone scraps in incomplete jar-urn with broken rim smoothed off. Simplest example at the site.

Burial 9. (Pl. I, *5*; fig. 16, *6*.) Lower humus. Scraps of adult bone in round jar-urn and upper of two large, incomplete urns below it.

Burial 10. (Fig. 9.) Lower humus. Remains of three adults in incomplete bowl-urn. Only personally recorded case of more than two individuals in a secondary burial.

Burial 20. (Pl. I, *8*.) Lower humus. Two infants, one in each of two nested bowl-urns, covered by an inverted bowl.

Burial 48. (Fig. 16, *5*.) Lower humus. Remains of adult at top, over earth, and infant in bottom of urn with covering bowl smashed down by Burial 47. Only case of adult and infant in same vessel.

Burial 62. (Figs. 13, *3*; 14, *1*; 16, *3*.) Humus. Adult male and aged adult, probably male, in incomplete urn. Unusually complete articulation in the parts of these individuals. Fish bones.

West Trench Burial 1. (Fig. 16, *8*.) Adult male and sub-adult female in complete urn.

West Trench Burial 2. (Fig. 16, *9*.) Aged adult and adult, probably male, in complete urn with fragmentary plate cover.

West Trench Burial 5. Three adult skulls in jar-urn removed by Berry.

## *CREMATION*

Burial 5. (Fig. 9.) This consisted simply of about ninety pieces of burned bones, representing an adult, probably a male. The entire group of remains could be held as a double handful. There were a dozen skull fragments, all very small, including the mastoid process, which was robust. The rest were small, broken, split fragments, chiefly of long bones. No piece was more than 7 cm. in length. These burned remains were found in the humus at a depth of 65 cm. from the surface.

The conclusion that they represent an intentional cremation seems reasonable, yet there may be doubts as to this in view of the fact that no others of the sort were found. It may be that the actual burning of the bones was done by accident, as in a burning house, and that a simple direct secondary burial was given the remains.

## *PRIMARY BURIALS*

A primary, as opposed to a secondary, burial is one in which the body is not allowed to become disarticulated. Thirty-two of this type were found in the Los Tamarindos Trench. As explained above, the numbers of primary and secondary burials in comparison is of little significance; the important point is that the distribution of primary burials has a stratigraphic significance. The chart of burials showing their relative depth from the surface by categories (fig. 12) illustrates this point sufficiently for the moment. The stratigraphic evaluation of associated material and conclusions based on the evidence of wares and burial practices is summed up in the Stratigraphic Conclusions (p. 81).

The tripartite division of the primary category has been done on the same basis as similar divisions of the secondary group, taking into account the question of whether they were direct or contained in vessels, or by other means. Of less importance is the consideration of covering objects.

**Direct, with No Covering.** This simple and widespread method of disposal of the dead was found in twenty-seven cases at La Cabrera, all in the Los Tamarindos Trench. In the first meter (fig. 9) there were found numbers 17 and 64; in the second (fig. 10) numbers 27, 28, 50, 66 and 72; below the second meter all burials are indicated on a single plan (fig. 11); these were, for the third meter, numbers 41, 42, 43, 44, 45, 49, 73, 74 and 75. The fourth meter produced numbers 46 and 70, the fifth, numbers 13, 14, 40, 67, 68, 69 and 71. They represent 84.3% of all primary burials, being the most usual and the simplest type of primary burial. No subdivision has been made on the basis of position, but this has been summarized above.

Burial 17. (Fig. 9.) Lower humus. Adult, flexed on left side, disturbed after burial in pelvic region.

Burial 64. (Figs. 13, *3*; 14, *1*.) Lower humus. Adult female, flexed on left side. Probably interred at same time as Burial 65, infant remains in sherd over pelvis.

Burial 27. (Fig. 16, *2*.) Sub-humus gravel. Adult male, flexed on back. Skull lacks all trace of auditory meatus, possibly explaining two antlers placed at this side of head.

Burial 28. (Pl. I, *4*.) Sub-humus gravel. Adult male, flexed on back.

Burial 29. (Fig. 10.) Sub-humus gravel. Sub-adult male, loosely flexed between child burials, 30 and 31.

Burial 66. (Figs. 13, *3*; 14, *1*, *2*.) Sub-humus gravel, intruded through humus. Adult female, flexed on back, with infant, apparently complete, in crook of right elbow.

Burial 72. (Fig. 10.) Sub-humus gravel, possibly intruded through lower humus. Adult male, flexed on back and left side.

Burial 50. (Fig. 16, *12*.) Lower level sand and gravel. Young adult female, flexed on back, over string of heavy shell beads.

Burial 51. (Fig. 10.) Lower level sand and gravel. Adult male, semi-flexed on right side.

Burial 41. (Fig. 11.) Lower level (fig. 8, stratum 6). Infant, 2 or 3 years, flexed on left side.

Burials 42, 43. (Fig. 11.) Lower level (fig. 8, stratum 7, upper part. 42 – Child, ca. 5 years, flexed on back. 43 – Infant, flexed on left side.

Burial 44. (Fig. 11.) Lower level, skull and knees in dark sand (fig. 8, stratum 6). Lens of pure water deposited ash over southern half of grave, adult male, sitting position.

Burial 49. (Fig. 11.) Lower level (fig. 8, stratum 6). Young adult, probably male, semi-flexed on right side.

Burial 73. (Fig. 11.) Lower level (fig. 8, stratum 6). Directly below Burial 72. Adult, flexed on left side.

Burial 45. (Fig. 11.) Lower level (fig. 8, stratum 7). Adult male, flexed on back and left side.

Burials 74, 75. (Figs. 6, 11.) West Clearing Area, coarse gravel under heavy rocks. Adults, flexed, 74 on right, 75 on left side.

Burial 46. (Fig. 11.) Lower level (fig. 8, stratum 10). Infant, flexed on left side.

Burial 70. (Fig. 11.) Lower level, in sand and gravel corresponding to fig. 8, stratum 7. Found only slightly below surface of terrace from previous excavation. Adult, flexed on left side. Pipe of La Cabrera Polished Gray ware next to head.

Burials 13, 14. (Fig. 11.) East Side Lower Level, coarse gravel under heavy rock stratum (fig. 7).

13 – Child, 3 or 4 years, flexed on left side.

14 – Adult, probably male, flexed on left side.

Burial 40. (Fig. 11.) Heavy gravel under rock stratum (fig. 8, stratum 10, lower part). Adult, extended on ventral side, La Cabrera Plain and Polished Gray ware in association.

Burials 67, 68, 69, 71. (Fig. 11.) West Side Lower Level, in gravels underlying heavy rocks (see fig. 7). Lenses of clay and bands of ash and charcoal occur in this sand and gravel. There is more sand towards the south, probably indicating beach deposits. All adults, flexed. 67 – left side, 68 – back, 69 – back, 69, 71 – right side. Occasional water worn human bones in these levels may indicate washed out burials.

**Direct, with Pottery or Slab over Skull or Whole.** The four burials which make up this category are numbers 63, 34, 33 and 39, of the first, second, third and fourth meters respectively, of the Los Tamarindos Trench (figs. 9, 10, 11 and 6). These represent 12.5% of the total number of primary burials and do not differ from the preceding type, except in regard to covering material directly over the whole or a part of the skeleton. The stratigraphic trend of burials of this type is comparable to that of the more numerous simple direct group (fig. 12).

Burial 63. (Figs. 13, *3*; 14, *1*, *2*.) Lower humus. Adult, disturbed in pelvic and lumbar regions. Loosely flexed on back. Skull covered by vessels of Valencia Red were completely disintegrated.

Burial 34. (Pl. I, *3*.) Sub-humus gravel, intruded through humus. Adult female, flexed on left side. Valencia Red bowl over skull.

Burial 39. (Fig. 11.) Lower level (fig. 8, stratum 7), about directly below Burials 8 and 9. Adult female, extended on ventral side. Incomplete La Cabrera Plain jar over head.

Burial 33. (Fig. 16, *13*, *14*.) Lower level (fig. 9, stratum 10, just above rocks). Adult male, flexed on left side, under metamorphic slab, worked on under side in oval pattern and covered by inverted La Cabrera Plain jar.

**Urn, La Ceiba Trench Burial 5.** The single case of primary burial in an urn was found in the La Ceiba Trench. This represents 3.1% of the primary burials, but the figure may be worthless due to the lack of further examples. The fact that the burial was that of an infant corroborates Bennett's findings at La Mata, but there he found a number of children so interred. On La Cabrera only one of fifteen contained in urns had been buried before disarticulation of the skeleton.

The plan and lateral view from the north of the La Ceiba Trench (fig. 15, *upper* and 15, *lower*) show clearly the position and details of Burial 5. The bowl-urn which contained the skeleton of the child lay under the shoulder of the large urn of Burial 4; it had been mended by the "crack-lacing" method. In the bottom the body of a very young baby had been placed in a tightly flexed position on the left side, with the hands drawn in under the chin. A deep bowl, lacking a section of the rim but otherwise complete, had been inverted over the body. No other mortuary offering was discovered. Thus the burial differs essentially from the other humus burials of infants only in the pre-burial treatment of the body. This is most important, being the primary basis for the classification of all La Cabrera burials.

## LA CABRERA SPECIMENS

In the cases of pottery and stone work especially, there are marked differences between the upper and lower levels of the Los Tamarindos Trench, checked by two test pits. This is taken into account in description; in each category material from the earlier levels is described first. In the section on Stratigraphic Conclusions (p. 81), cultural and stratigraphic evidence is gathered together and phases of culture for the Lake Valencia region are outlined. The specimen collection is in the Peabody Museum, Harvard University.

## *CERAMICS*

In describing and classifying ceramics the term "ware" is taken to be synonymous with "pottery." Groups of pottery, when given geographical names, are not called "wares," but are referred to as "types." A particular ware may be defined as a group of pottery characterized by constancy of surface finish. Further subdivision of the more generalized ware on the basis of form or decoration produces types, which may be further subdivided. The segregation of types in a large group of material is here based first on surface finish, secondly on form and decoration. The resultant ceramic group is wholly taxonomic; it must be made up of vessels or other pottery objects which share the attributes arbitrarily chosen as criteria. Types are hence merely convenient groupings set up by the archaeologist as study aids.

The three descriptive criteria of a type, surface finish, form and decoration are the only ones which most archaeologists are capable of using as definite criteria. In the case of surface treatment, he is on somewhat dangerous ground, since megascopic determination of details is sometimes difficult without technological analysis. In using Miss Shepard's outline [18] as a basis for description I have changed the order in which some of the features are taken up, putting surface features first, since that is the primary criterion for segregation. This is followed by paint and paste. Miss Shepard was kind enough to thin-section a small representative selection of sherds; without her assistance I should not have been able to describe the nature of paste inclusions. I have added Structure as an additional feature, since this can be determined for most types.

Color, the most important single feature of the surface finish, and as such of primary importance in segregation, has been defined by comparison of the wares to the plates in Ridgway's [19] *Color Standards and Color Nomenclature*, recommended by Miss Shepard.[20] Colors are referred to by the use of Ridgway's names, which are not usually easy to visualize, and by symbols. The number-letter-prime symbols are the key to the use of Ridgway; in practice they are far more useful than names.

Hardness, a much less important feature, but one which should be included in any comprehensive pottery description, has been determined by the use of the minerals of Mohs' scale, also recommended by Miss Shepard.[21]

The descriptions of pottery types which follow start with those of wares from the lower, or lake-deposited levels, of the La Cabrera excavations. In designating lower level types, the name of the peninsula, La Cabrera, has been used, since these wares have not as yet been found in any quantity elsewhere. For the more widely known later, upper level type, the name of the lake, Valencia, has been chosen.

**La Cabrera Plain Type.** Ware of this type was found in the lower levels of the Los Tamarindos Trench and of the Northwest and East Test Pits. The first sherds were found in the lower half of the second meter of the Los Tamarindos Trench; at about 1.40 meters the last sherds of the ware characteristic of the humus were found; most of these were probably the results of intrusion through burials. There is no exact geological lower limit of the "upper level," but it coincides roughly with the bottom of Stratum 3 of fig. 8, the mixed sub-humus sand, gravel and clay stratum into which secondary burials were intruded. Everything below this may be termed "lower level."

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[18] Kidder and Shepard, 1936, p. 444.

[19] Ridgway, 1912.

[20] Kidder and Shepard, 1936, p. 430.

[21] Kidder and Shepard, 1936, p. 433.

Sherds of Plain ware comprised approximately three-quarters of those found in the lower levels. This estimate is based on a count made in the field. Only one restorable vessel of the type was found; all the rest of the material was in fragmentary condition.

The La Cabrera Plain type is usually gray; of coarse texture, dull, uneven finish, unslipped and tempered with a mixture of mineral and ground sherds. Shapes include large jars, spouted jars, some bowls, platters or griddles and miscellaneous objects. Low "leg-ring" bases are common; annular bases rare. Handles are horizontal loops. Decoration is rare, consisting of incision or punctation on vessel walls modeling on spouts and some "adornos." Coffee bean, shoe button and punched eyes are equally common.

A. SURFACE FEATURES.[22] (1) Color. Some range; most usual approximates Drab Gray (17″″d). Many sherds are darker; Light Drab (17″″b) and Drab (17″″) are represented. Rarer are sherds of even darker and brownish shades, Brownish Drab (9″″) and Deep Brownish Drab (9″″i). Little difference between interior and exterior of sherds; some obviously stained black on the interior through use as cooking vessels. Fire-clouded black areas rare.

(2) Hardness. 3 to 4, averaging about 3.5.

(3) Evenness. Surfaces of large vessels imperfectly planed. Undulations indicate that vessels were smoothed before they were completely dry. Final smoothing left marks of smoothing tool, but surface was not usually polished evenly. Coarser inclusions are usually visible; although imbedded in the paste, they were not covered. Some pieces were more carefully smoothed and compacted; these do not show marks of the scraping tool so obviously, but none can be described as well polished.

(4) Texture. Surface texture variable; very few areas on any of the sherds have been compacted sufficiently to render them smooth or slick to the touch. The bulk of surfaces are rough, especially qualified by Miss Shepard[23] to apply to non-compacted surfaces, gritty to the touch. Some gritty; this may be the result of wear or defects.

(5) Luster. Very few lustrous surfaces, although occasionally an area exceptionally well smoothed may reflect some light. Dull surfaces are the rule.

(6) Slip. Slip is absent. Some few sherds appear to have been given a wash of fine-textured clay, probably done in the process of finishing. Miss Shepard found no slips on any of the sherds of the type which she examined.

(7) Defects. Considerable abrasion of the surface on some pieces. It should be recalled that many sherds of this type are water-worn, denoting the fact that they were washed on the beach. Pieces which have not been water-worn are in good condition, showing no particular defects.

B. PAINT. Absent. Three painted sherds from the lower levels of the Los Tamarindos Trench have been considered separately, as probable trade pieces (p. 60).

C. PASTE. (1) Color. Gray is the usual paste color, varying in shade from Drab Gray (17″″d) to darker tones of Carbon Gray, Dark Gull Gray, Slate Gray and Slate Color. The latter is almost black. Zones of brown sometimes occur in the paste; these are usually from 3 to 5 mm. in width and are Pecan Brown (11″i) or as dark as Rood's Brown (11″k). As a rule zones are absent; the dark grays predominate from edge to edge.

(2) Inclusions and Clay. Microscopic examination of thin sections shows that three different clays were used in the seven sherds analyzed. All were characterized by a variable amount of organic material, diatomes and siliceous spicules, indicating a lacustrine source. It is impossible to tell megascopically which of the three clays was most commonly used, since they all look very much alike to the untrained observer, nor does it seem that these technical descriptions would be of interest here.

Temper was of two kinds, sherd and quartzite, or gneiss. Several sources of temper are indicated, but again, no estimate as to the most common type can be made megascopically. It is impossible to note sherd temper excepting in the cases of very large pieces used in heavy, coarse griddles. In most sherds, temper appears white, dull and granular. Sherd and mineral matter vary in relative amount, from all mineral matter to more sherd than mineral; usually there was less sherd.

(3) Texture. Moderately to heavily tempered. Many very coarse inclusions, over 1 mm. in diameter; paste coarse, or very coarse, granular; dense rather than pliable.

(4) Fracture. Fracture does not leave a truly smooth break, due to large inclusions. Break is at right angles to the vessel surface, rough and granular.

(5) Hardness. 3 to 3.5.

D. STRUCTURE. Vessels were constructed by

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[22] As in the case of burials, detailed descriptions have been made as brief as possible.

[23] Kidder and Shepard, 1936, p. 445.

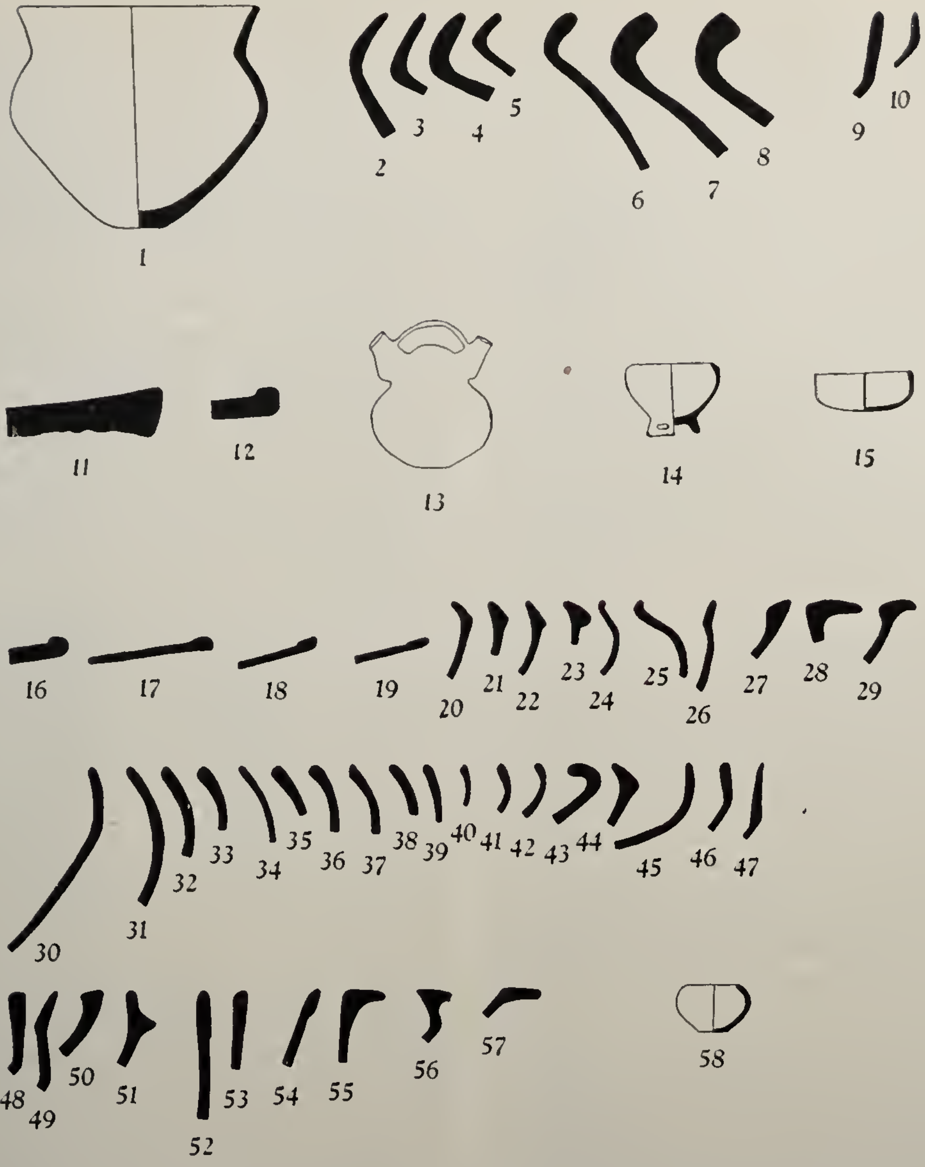

FIG. 17. *1*, La Cabrera Plain jar, ⅛; *2–8*, La Cabrera Plain jar rim sections, ¼; *9*, *10*, La Cabrera Plain, bowl rim sections, ¼; *11*, *12*, La Cabrera Plain griddle rim sections, ¼; *13*, probable arrangement of double spouts connected by handle; *14*, La Cabrera Polished Gray leg-ring base bowl, ⅛; *15*, La Cabrera Polished Gray bowl section, ⅛; *16–19*, La Cabrera Polished Gray platter rim sections, ¼; *20–29*, La Cabrera Polished Gray bowl rim sections; *30–57*, La Cabrera Red bowl rim sections, ¼; *58*, La Cabrera Red bowl, ⅛.

the coiling method, but exact procedure cannot be determined. Many basal sherds have broken along coils, showing them clearly. Vessels were smoothed too well to leave many undulations on the surface.

E. SHAPE — JARS. Most sherds appear to have been parts of rather large jars. The single restorable specimen (fig. 17, *1*; pl. V, *1*) was found over Burial 33. Jar rims (fig. 17, *2–8*), the outcurving types, and straighter, slightly outcurving types with no lip flare occur in approximately equal proportions. Smaller jars all had sharply outcurved rims. Body sherds indicate little; there is no evidence that body shape differed greatly from that illustrated in fig. 17, *1*. Base sherds of larger jars, all almost identical with that of the base shown in section in fig. 17, *1*. Although flat on the bottom, wall and base merge in a smooth curve, rather than at a sharp angle with a sharp distinction between the two. Bases of smaller, thinner-walled jars are lacking.

SPOUTED JARS. Several spouts were found (pl. II, *11–17*), but shape must be deduced from illustrations in Requena[24] and from his collection. Fig. 17, *13* shows arrangement of double spouts, luted to vessels and connected by a clay strip. Not all modeled

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[24] Requena, 1932, pp. 77, 79, 125.

"spouts" were functional: some few have no orifice; two lack modeling. Requena illustrates examples with one true and one closed spout.

Bowls. Only two bowl rim sherds were found (fig. 17, *9*, *10*). They indicate that bowls were made, but little else.

Griddles. A few griddle sherds were found, but only two rims (fig. 17, *11*, *12*). Heavier pieces were apparently made on the ground, since bottoms are rough and unsmoothed. One specimen shows that it was made on a mat, of which the sherd bears a faint but unmistakable impression (pl. V, *2*).

Basal Supports. Most large jars had no additional basal supports. Some middle or small sized specimens, and probably a few of the larger, were mounted on "leg-ring" bases, of which a number of fragments were found. There are only two fragments of annular bases. These are very low rings around flat bases, sufficient to raise the base only 1 cm. off the ground.

The "leg-ring" base consists of a basal ring attached to the body of the vessel by means of legs or feet (pl. V, *3*, *4*, *5*). In each case there is a separate short leg or foot which was luted to the vessel and to the basal ring. Rings are usually round in sectoin, slightly flattened on the bottom from wear. That shown in pl. V, *5* is not; were it not for the fact that the flat basal strip was attached separately by luting to the vessel, it would have to be classified as a perforated annular base. Leg-ring bases are extremely low and could not have held the superimposed vessels more than a very few centimeters off the ground. None were found actually attached to a base, nor is there any indication of how many legs or feet were used between vessel and ring.

Free legs or feet rare, but one basal sherd (pl. V, *6*) shows four low feet; these are well worn and may have been somewhat longer originally. The single unbroken foot rises 1 cm. from the base of the vessel and is 2 cm. in maximum diameter. It is just possible that these feet were connected by a ring, of which all signs have been obliterated. As a tetrapod base, it is the single example of Plain type ware which indicates the number of legs or feet used. Only four other free legs.

Plain solid leg, 8 cm. in length, round in section, with an upper diameter of 3 cm., a plain hollow foot, 3.5 cm. in diameter, 3 cm. in height. No indications of vessel shape. Single solid leg (pl. II, *4*) luted to vessel and held more firmly in place by a central projection which must have penetrated the wall partially or even completely. Pl. II, *1*, a somewhat doubtful specimen, probably the leg of some sort of elaborate bowl. Presumably, the vessel was attached to the upper surface, which shows a definite luting area. Pl. II, *2* shows profile.

Handles. Handles of characteristic type. A number found in excavation, but few attached to sherds large enough to indicate position. Most usual type a small horizontally placed loop handle, round in section, apparently confined to shoulders of smaller jars (pl. II, *3*). Pl. II, *5*, *6*, same type shown from above and in profile. Upward projection a characteristic feature; most are marked by punctation. Method of attachment (pl. II, *5*); ends of the handle pierced the vessel wall, joints were filled with clay and smoothed off. Two interior elevations usually left.

Pl. II, 7, similar handle with modeled bird head. Pl. II, *8*, unique strap handle, flat in section. Attachment by simple luting to the surface rather than by piercing vessel wall. Only two vertically placed handles (pl. II, *9*, *10*).

Spout Handles. Strips between spouts or nonfunctional "spouts" (fig. 17, *13*; pl. II, *11–17*). Strips are round, slightly or fully flattened in section. Internally, spouts are rough; coil marks were left quite unsmoothed. Rough scraping off of extra bits of clay and sometimes the use of a stick or other round object to hold the piece, presumably while modeling it, can be determined (pl. IV, *15*). Interior of spout, of La Cabrera Red type ware, somewhat smoother than Plain ware spouts.

Miscellaneous Objects of Plain Ware. A number of small objects of Plain type ware were found in the lower levels. These are rounded and drilled sherds, possibly spindle whorls (pl. III, *13*), a broken round spindle whorl (?) (pl. III, *14*, *15*), probable ear- or cheek-plugs (pl. III, *16–19*), fruit or gourd shaped pendant (pl. III, *20*) and a broken whistle with slit leading to hollow head (pl. III, *21*, *22*).

F. DECORATION. Rare. Modeling, incision and punctation singly, or in combination. Painting absent. Simple incision and punctation applied on vessel wall (pl. II, *3*) rare. Pl. II, *19*, row of punctations on raised strip between two incised lines on neck of a jar. Pl. II, *20*, most elaborate jar neck pattern; elements of the design were made with a broad, smooth tool. Pl. II, *4*, coffee bean elements combined with punctation. Pl. II, *1*, *2* possibly intended to represent a head; eyes, nose and mouth can be seen. Spouts with modeled faces (pl. II, *11–17*). Round eyes of pitted shoe button type (pl. II, *16*) common on lower level.

Adornos. (Pl. III, *1–12*.) Applied decorative elements, some of which may have served as handles. Rare, in comparison with later ware. All but two on body. Pl. III, *1*, *2*, *3*, two of three similar specimens, only type represented by more than one. Bird or bat attached to vessel wall in three places. Pl. III, *9*, *12*, sole examples of rim adornos.

**La Cabrera Polished Gray Sub-Type — Vessels.** This is a sub-type of Plain type ware and is relatively rare. It is strictly of lower level provenience and represents approximately one-eighth of the ware from these levels. Vessel sherds are very scarce; about half of the fragments are those of elbow pipes.

In color it does not differ radically from Plain ware; it has been described separately on account of certain obvious differences, but there are traits which the sub-type shares with the major type. In other words, there is sufficient constancy of surface finish, form and decoration between the type and sub-type so to classify them, rather than establishing two separate types. It also seems more reasonable to classify them in this way because of the fact that the polished group vessels are all small, whereas those of the Plain type are nearly all large. It is possible that differences in surface finish and other minor differences in shape and decoration were largely conditioned by size or purpose. In this case, small vessels and pipes should certainly not be classified as a separate type.

Deep bowls with low leg-ring bases, platters and a few jars are represented by sherds and a few restorable pieces. Decoration is rare, except on pipes, and but for a few traces of red paint filling incision (which is present also on the wooden objects, fig. 18), it is entirely plastic.

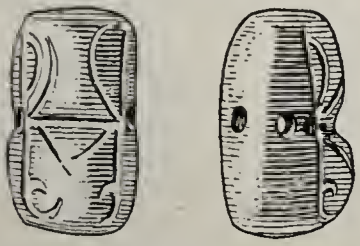

Fig. 18. Wooden bead or pendant, La Cabrera Phase. Natural size.

A. SURFACE FEATURES. (1) Color. Most usual Pale Drab Gray (17″″f); Drab Gray (17″″d) and Light Drab (17″″b) also represented by a few sherds; several are of brownish color, approximately Wood Brown (17″′). Fire-clouding has produced black or very dark gray patches. Some pipes nearly solid black may have been intentionally smudged, but if this was done, it was accomplished with little skill, since none of the complete or nearly complete specimens were fully blackened.

Miss Shepard, in her technological report on the two sherds of this sub-type, says that the gray color is indicative of a reducing atmosphere in firing. Refiring at 600° F. for 5 minutes produced a deep buff, the normal color at low range under oxidizing conditions. Refired fragment closely approximates Wood Brown (17″′). Thus, it appears that although normally fired in reducing atmosphere, some pieces were oxidized and some rather heavily smudged, probably by accident.

(2) Hardness. 3 to 3.5.

(3) Evenness. The name of the sub-type suggests a well finished, compacted surface. This is true of sherds in good condition. Many have been badly worn, but there is evidence that originally all were fairly well polished. Smoothing was done carefully; there are no very marked surface undulations. Marks of polishing stone visible in most cases, especially on vessel sherds; some of the best sherds and pipe fragments scarcely show them at all.

(4) Texture. Smooth.

(5) Luster. Best pieces lustrous, some few almost highly so; most too worn to reflect much light, except in spots.

(6) Slip. Viewed with a 10-power lens, no indication of slip. Miss Shepard, using a 40-power microscope, could discern a thin surface layer, distinct in cross section, which may have been attained by a thin coat of a slightly different clay. She states that there are more mineral grains exposed on the surface than is usual in a slipped ware. Since the indistinct surface film appeared on two very similar sherds, and no slip is visible with a 10-power lens, it is probably safe to call this polished ware unslipped.

(7) Defects. Considerable abrasion of compacted surfaces. Some of this is due to water and sand action. Others, well lodged among rocks or dropped into thin clay deposits, are quite fresh.

B. PAINT. No true painted design on any specimens of the sub-type, but in two cases, red paint, a heavy ochre mixture, was applied in incision (pl. III, *23*; IV, *12*, *13*).

C. PASTE. (1) Color. Usually nearly black. Zones of gray, brown and the same color as the surface flank the dark central core. Zones vary from less than 1 mm. to about 2 mm. in thickness. Miss Shepard states that "The dark core shows that the clay was carbonaceous. The carbonaceous matter was burned out from the surface zone during firing, but the atmosphere was not sufficiently oxidizing to change the state of iron in the clay."

(2) Inclusions and Clay. Miss Shepard states that the Polished Gray sherds were made of clay which contained a more numerous and varied assortment of organic remains than any other. These consisted of fragments of diatomes of various forms, but there were none of the silicious spirals common in other clays. Temper was found to be "entirely unlike that of any sherds from Lake Valencia. It consists of crystalline calcite, flakes of mica and grains of quartz and quartzite. The calcite, some of the crystals of which are colorless, some pinkish, predominates . . . grain size is predominantly fine with some medium grains and very rarely a coarse grain." Calcite temper was indicative to Miss Shepard of a low firing temperature. The combination of distinctive technique in firing and a different paste raised doubt in Miss Shepard's mind as to whether or not Polished Gray was a local ware. Although not very common, I feel that there is enough to indicate that it was. Furthermore, an analysis of two sherds, which could have come from the same vessel, is not conclusive, as Miss Shepard pointed out. Only the technologist skilled in ceramic analysis can tell whether the other sherds of the sub-type are comparable in paste. To me, most appear to be so. This possible complete differentiation in paste be-

tween Plain and Polished Gray ware is another very good reason for classifying the latter as a sub-type, and an example of the danger lying in wait for the non-technical observer who attempts to use paste as a criterion for segregation.

(3) Texture. Moderately tempered, inclusions making up from 20 to 30% of volume of paste; preponderately fine, with inclusions under 0.25 mm. in diameter; some medium, very few coarse inclusions. Granular, dense.

(4) Fracture. Sherds break straight across, at right angles to the vessel wall. Break is smoother and finer than in any other Lake Valencia wares.

(5) Hardness. About 3.

D. STRUCTURE. Vessels too small and too well smoothed to show obvious coil marks, or to break easily along coil lines, as do those of Plain type ware. Probably coiled, since coiling was in use contemporaneously.

E. SHAPE – Bowls. Only two restorable vessels of Polished Gray type ware were found in the course of excavation. Both are bowls, one (fig. 17, *14*; pl. V, 7) deep and with incurved rim, the other (fig. 17, *15*) a low, shallow bowl, also with a slightly incurved, but unthickened, rim. Deep bowl with low leg-ring base probably the most usual shape, judging from the number of rim and base sherds found. Fig. 17, *20–29*, bowl rim sherds which could be drawn. Four (*20*, *21*, *22* and *23*) are similar to incurved rim of fig. 17, *14*. Two with slightly everted and rounded lips (*24*, *25*) have polished interiors and were probably of carinated form. A single example (*26*) shows a steep wall and slight outcurve; *27* is also outcurved, but shows a less steep wall. The remaining two (*28* and *29*), sharply outcurved, give no indication of body shape.

Platters. Not comparable to thick griddles of Plain ware. All are sherds (pl. V, *8–11*). Thickness varies from 4 to 8 mm. Diameters appear to have all been between 30 and 33 cm. Rims always thickened (fig. 17, *16–19*). Under sides smoothed. Although not as common as bowls, platters were apparently the next most usual form.

Jars. Very rare; no rim sherds among the few found. One spout (pl. III, *23*) indicates spouted jars.

Basal Supports. Fig. 17, *14* and pl. V, 7, low tetrapod leg-ring base used very commonly in early times at the Los Tamarindos site; similar, but larger, bases were used on Plain ware vessels. About twenty fragments of such bases in Polished Gray ware indicate common use on bowls. Feet low and broad, basal ring roughly round in cross section. No free legs or supports of other type.

Handles. Spout with strip handle, presumably from double-spouted jar, is the sole example.

Pipes. The presence of pottery elbow pipes in the lower levels of the Los Tamarindos Trench, with only a single broken stem from the humus, is an important stratigraphic feature of the site. Von den Steinen, in his discussion of the material excavated by Jahn, says[25] that most pipes were found along the lake shore on this island of Caigüire, and at La Cabrera. This would be natural on the peninsula, where lower level material could easily be washed out along the beach. Von den Steinen adds that he believes pipes to be post-European. In this he was, of course, mistaken. Their form is at times suggestive of European clay pipes, but the fact that they are a component of the early phase of culture at Los Tamarindos definitely proves their relative age.

Lake Valencia pipes have been mentioned in several distribution studies; the best illustrations are to be found in Ernst,[26] Von den Steinen[27] and Requena.[28] Bennett[29] found a fragment at La Mata, at the edge of the mound; there is no statement as to depth, but the lake deposited marl is close to the surface at that point.

The lower levels at Los Tamarindos produced three practically complete pipes and approximately one hundred broken specimens. Of these, many are whole bowls or stems.

There is considerable variation among pipes, but all appear to be of Polished Gray ware. Blackened fragments are not uncommon, as stated above, but no sizable piece is completely black. Since Miss Shepard made no analysis of pipe fragments, it is impossible to be certain that they are technically the same as vessel sherds.

All were presumably of the elbow type, that is, the bowl alone held tobacco and was placed at one extremity of the stem, at an angle of from 90° to 45°. It is impossible to ascertain from the interior of bowls whether true tobacco was smoked. There are, in some cases, definite signs of use: a sooty blackening or simply a blackening, but insufficient to determine exactly what was smoked. There is no reason to doubt that tobacco was in use.

The most useful criterion for the classification of pipes is the presence or absence of elaborate modeled and incised decoration. Dividing the specimens on this basis produces two groups, Plain and Decorated types.

Plain Type. Probably the most numerous, judging from the number of undecorated fragments. However, undecorated stems do not always mean that the bowl was plain, whereas an undecorated bowl seems to have always had an undecorated stem. All restorable specimens of this type (pls. III, *26*; V, *17–19*) have rounded bowls and outcurved rims. Straight sided bowls with flange or depression below rim, and plain stems shown in pls. III, *27*, *28*; V, *20—23*. Stems are simple and round in section; two small supporting projections always placed below the bowl; their lower extremities diverge from the mid-line. Overall length appears to have been from about 10 to as much as 17 cm. Bowl size varies. Holes through the stem from bowl to mouthpiece vary from 5 to 6 mm. in diameter at the mouthpiece end. Usually remain the same size for entire length, since they were made over a stick or similar round object, the marks of which can often be seen. Bowl and stem were made separately and luted together with the addition of strips of clay smoothed down to become indistinguishable except when broken. (Pl. III, 27.) Mouthpieces mostly broken off, probably all provided with modeled flange (pl. III, *26*); some are smooth (pl. V, *19*).

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[25] Von den Steinen, 1904, p. 106.

[26] Ernst, 1884, fig. 6.

[27] Von den Steinen, 1904, fig. 12.

[28] Requena, 1932, pp. 51, 134.

[29] Bennett, 1937, p. 120. Fig. 14.

Decorated Type. Decorated type differs from Plain in form as well as in elaborate modeled and incised decoration. This must be determined from fragments showing the junction between bowl and stem, since there are no complete specimens. Simpler examples of decorated bowls (pl. IV, *1, 2, 5*); stems of these probably plain (pl. V, *24, 25*). Ernst,[30] Von den Steinen[31] and Requena[32] illustrate similar specimens with plain stems. Usually the bottom of the stem was somewhat flattened; under bowl two "feet" extend outward and forward on either side but are flat on the bottom (pl. IV, *3, 4*; V, *24–28*). In this case the bowl is usually perpendicular but some may be at an angle. Stem length varies from 9 to 12 cm. Some in Requena's collection are as much as 20 cm. in total length. Stem interiors the same as those of Plain type. In one case (pl. V, *27*) there is a hole through the top of the stem near the mouthpiece. Mouthpieces were made plain (pl. V, *24*), or circled with incision (pl. V, *28*); most are broken. Decoration marked by skillful, careful execution. Modeled projections usually outlined with incision. Human representations all characterized by coffee bean rather than round eyes. Stem decoration usually, but not always, close to bowl (pl. V, *24–28*; IV, *4*). Bowl-stem angle of elaborately decorated specimens exhibits a variety of features (pl. IV, 7–*11*). Bowls (pl. IV, *6, 12, 13*) in some cases are straight sided, beautifully executed, with red paint filling incision in one instance (pl. IV, *12, 13*).

Ear-Plugs. One complete circular ear-plug (pl. III, *24, 25*) and two fragments of similar specimens found in Los Tamarindos lower levels, similar to Plain ware specimens (pl. III, *16, 17*). Complete specimen has a minimum outside diameter of 5.3 cm. at the groove; one fragment would have measured approximately the same; the other, about 4 cm.

F. DECORATION. Modeling, incision and punctation singly or in combination. No profuse decoration. Paint in incision only. Simple modeled and incised sherds (pl. V, *12–16*). A straight, simple, incised line occurs on only one jar sherd. Punctation usual method of decoration on platter rims (pl. V, *8–11*). One has two rows of punctation on exterior border of lip, invisible from above.

**La Cabrera Red Type.** This is a red slipped ware, occurring in the lower levels of the test pits and Los Tamarindos Trench in approximately the same quantity as the Polished Gray sub-type. That is, sherds of the type make up about one-eighth of the total number of sherds from the lower levels. Since there are no pipes of this ware, the number of vessel sherds is somewhat greater than that of Polished Gray.

The type as a whole shares certain features with Plain and Polished Gray ware, notably color and finish of unslipped areas. Jar rim profiles and flat bases resemble those of Plain ware. The double-spouted jar also occurs. Only one restorable bowl was found, so that various bowl and jar shapes must be inferred from sherds. Decoration is rare and, as in the other lower level types, consists of modeling and some punctation, but chiefly of simple incision, usually in single encircling lines.

A. SURFACE FEATURES. (1) Color. Unslipped surfaces, chiefly interiors, similar to those of Polished Gray ware. Pale Drab Gray (17″″t) and Drab Gray (17″″d) most usual; a few sherds are darker gray. Slipped surfaces in good condition a bright red, Pompeiian Red (3′i), worn and dulled surfaces are Ochre Red (5′i).

(2) Hardness. Unslipped areas average about 3.5. Slip is soft, not harder than 2.5.

(3) Evenness. Surfaces well smoothed and polished. Unslipped surfaces show marks of the polishing tool; they are apparent occasionally on slipped surfaces.

(4) Texture. Definitely smooth, both for unslipped and slipped surfaces.

(5) Luster. Entirely dependent on wear. Well preserved sherds lustrous, worn specimens dull.

(6) Slip. Red slip is thick, easily visible to the naked eye in section. It is probably a red ochre.

(7) Defects. Abrasion common, since the slip is soft. Peeling shows on a few specimens.

B. PAINT. Painted designs absent. Slip does not always cover the whole interior or exterior of a vessel. When applied as a band on the rim, it is comparable to painted design.

C. PASTE. (1) Color. Dark gray or black, frequently with thin zones at the edges of a section, comparable in color to the unslipped surface.

(2) Inclusions and Clay. Miss Shepard reports that the paste is comparable to that of Plain ware. The clay contains some organic remains in the form of siliceous spicules and diatome fragments. "The paste is sherd tempered and contains relatively little mineral matter, mainly fine to medium grains of quartz and quartzite."

(3) Texture. Moderately tempered. Inclusions from fine to coarse; coarse grains are sometimes mineral, to be found in sherds not examined by Miss Shepard, and sherd temper. Granular, dense, compact.

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[30] Ernst, 1884, fig. 6.

[31] Von den Steinen, 1904, fig. 12.

[32] Requena, 1932, p. 134.

(4) Fracture. Straight, at right angles to surface of vessel wall; fractured surface is rather rough and granular.

(5) Hardness. Averages about 3.5.

D. STRUCTURE. Two or three jar sherds show faint coil undulations; several pieces broken along a coil. Probably all vessels of the type were made by the coil method.

E. SHAPE. Having only one restorable vessel, shape must be inferred from sherds. Jars and bowls are the only shapes which can be determined.

Jars. Probably not very common. Some half dozen outcurved rim sherds, comparable to those of Plain ware (fig. 17, *2–8*) were found. These show only slight traces of the red slip. In two cases there is a band of red 3 cm. wide on the interior of outcurved rims which otherwise are finished in the Plain type style. Heavy sherds very rare. One spout (pl. IV, *14*, *15*) indicates that double-spouted jars with connecting strip handles were made, probably rarely. Bases probably all flat. One basal piece, definitely that of a jar, has walls flaring at an angle of 60°; no other indications of body contour. Several other flat bases, somewhat larger, measuring from 9 to 10 cm. in diameter, probably from bowls.

Bowls. Sherds chiefly from bowls. Two distinct principal types and three rare forms. (1) Commonest major type an incurved rim bowl, varying in rim diameter from 9 to over 30 cm.; single restorable specimen (fig. 17, *32*; pl. V, *37*). Rim sections (fig. 17, *30–42*). Interiors polished as a rule; one specimen (fig. 17, *30*; pl. V, *37*) had a slipped and incised interior. Sharply incurved rim bowls also made, apparently rarely (only two specimens, fig. 17, *43*, *44*). (2) Less common major type, open bowls, usually slipped on interior, with high, slightly out or incurved rim rising from lower wall. These vary in diameter from about 20 to about 34 cm. (fig. 17, *45–51*). The thick-lipped specimen (fig. 17, *50*) is unique, as is the flanged one (fig. 17, *51*). (3) Rare, minor type should not, perhaps, be called a bowl type, since there are no means of determining height; almost straight sided (fig. 17, *52–55*), probably flat bottomed, although this is uncertain. Rim diameters vary from 10 to about 36 cm. Most specimens must have measured 30 cm. or more; sharply outcurved rim (fig. 17, *55*) is unique. (4) Minor type represented by three rim sherds (fig. 17, *56*). Rim was incurved but had a flaring projection encircling it on the outside. Fig. 17, 57, unique outflaring rim. (5) Pl. V, *38*, broken bowl-like piece; may have been shaped as a dipper; unslipped on the interior, but slip can be seen just inside the rim where it ran from the top.

Basal Supports. Absent.

Handles. Only one small, vertical strip handle from common incurved rim bowl (pl. V, *39*), excepting strip handle on spout.

F. DECORATION. Sparse. Modeling, incision and some punctation, sometimes combined with bands of slip. Modeling rare (pl. V, *40–42*); only two adornos (pl. V, *40*, *41*). Simple incision, usually in single lines (pl. V, *34*, *37*). Incision appears on upper borders of all bowl rim sherds with marked out-flare (pl. V, *35*, *36*). It is uncertain how the lines were arranged; there was probably a continuous outer line enclosing a system of loops (pl. V, *36*). More elaborate incision sometimes present on the exterior of bowls of the common type, placed just below a rim stripe of red slip (pl. V, *30–33*). Bowl sherd with interior incision and punctation (pl. V, *29*) is unique.

**Sherds of Aberrant Type from Los Tamarindos Lower Levels.** Aside from Plain, Polished Gray and Red ware, the lower levels at Los Tamarindos produced a few aberrant specimens; these must be discussed separately, since there is every probability that they were not made locally. The material falls into two groups, plain and painted ware.

Among plain sherds there are some half dozen dark brown specimens, unslipped, moderately well smoothed and polished. Two of these were examined in thin section by Miss Shepard. She reported that they were composed of a distinctly different paste, containing no organic remains, appearing megascopically much more dense than Plain type ware and sparsely tempered. This feature is very apparent to the non-technical observer on comparison with ware of Plain type. Temper includes scattered sherd particles, of a type of clay dissimilar to that of local wares. Quartz, quartzite, sandstone, muscovite and chalcedony make up the mineral inclusions; none occur in quantity. Chalcedony is lacking in Plain ware pastes. These technological differences, plus the distinctive dark brown color of the exterior and the rarity of the ware, make it seem probable that it represents an importation. No large pieces were found from which shape could be discerned.

Three painted ware sherds were found among the hundreds from the lower levels. They were a vessel leg (pl. IV, *16*), a "winged" adorno (pl. IV, *17*, *18*) and a frog adorno on a rim (pl. IV, *19*).

The vessel leg is painted in a very dark brown on a heavy, creamy white slip. The paneled line design with "ticked" lines is definitely a western, Andean trait. The marks of attachment on the leg, combined with its curving shape, indicate that it was luted fairly high onto the wall of a vessel. Although this leg cannot be exactly matched with any single Andean specimen, it was undoubtedly made somewhere to the west of Lake Valencia.

The "winged" adorno was probably fastened to a vessel wall or lid. One side (pl. IV, *17*) has a simply modeled face with pitted shoe button eyes and a high nose. It is painted a solid, dull, dark red. The other side (pl. IV, *18*) has no modeling, but shows a simple black painted design. The white slip extends under the red paint only a short distance from the edge of the panel. It is uncertain whether the central pattern was exactly as shown or whether it consisted of comb elements, a decidedly western feature, especially typical of Carache ware. The extremity of each "wing" (one has been restored in the drawing) was marked by a crude animal head with round, pitted shoe button eyes and a slit mouth. This head is also a western feature.

The frog adorno (pl. IV, *19*) has been rather badly worn. It is made of an orange-brown plain ware and was once covered with a thick, white pigment, now nearly all obliterated. This piece may have been made locally, but the combination of paint, a ware which appears somewhat unlike that of La Cabrera Plain type, and the modeling of the frog in strips, all appear foreign to Los Tamarindos. Possibly, after Venezuela has been thoroughly surveyed archaeologically, these pieces may be identified with definite phases of culture, probably centered farther west.

**Valencia Red Type.** Practically all the pottery from the upper or humus level of the Los Tamarindos Trench and that intruded into the upper half of the second meter was of this type. The same applies to the humus of both test pits and to the West and La Ceiba Trenches. The only exception was a pipe stem of La Cabrera Polished Gray ware found in the humus next to Burial 62 and six small sherds of La Cabrera Plain type, found in the Los Tamarindos humus. Although there are some small differences, probably chronologically significant, between Los Tamarindos Trench pottery and that of the West and La Ceiba Trenches, there is not more than one type of one ware represented. Changes probably reflect the passage of time. The type is described as a whole before distinctions between groups of ware from different trenches are summarized.

In the case of the Valencia Red type there is a much larger sample of the ware available for study. This is especially true of whole vessels, so rare from the lower levels. The number of whole vessels is due primarily to burial customs in later times. Urn burials, of course, always yield at least one vessel. Often there were many more in association with a single burial. This is in contrast to the rare use of pottery with the dead in earlier times.

The extensive use of pottery in burials may provide more specimens but always raises the question of the purposes for which it was manufactured. In some areas funerary ware was made which is obviously distinct from culinary or service wares. In Los Tamarindos humus there is only one type of one ware. The burial area was full of the debris of village life. Many burial urns had seen long service before their final utilization. Some pieces found in burials definitely show the marks of use as cooking vessels. On the other hand, an approximately equal number had been used only for a short time, if at all. Sherds of the same type of vessel, however, found in the rubbish between burials, often indicate long, hard usage. It is safe to say that rubbish sherds are from exactly the same types of vessels found complete in graves. This leads to the conclusion that mortuary pottery was not different in any important details from that in use in daily life. If new pieces were placed in a burial, they were of the type generally made and employed from day to day. Therefore, in description of Valencia Red type ware, I have made no distinction between specimens found in graves and those found outside of them.

As the name implies, this is a red slipped ware. Texture is variable temper of mineral and sherd or sherd alone. Shapes include urns, jars, some spouted, bowls, griddles and female figurines. Basal supports are very rare; there are indications of perforated annular bases, and the ordinary annular base was used at other sites. Handles, excepting adorno handles, are scarce. Decoration, with the exception of two cases of the use of soft white paint, is limited to modeling, incision and punctation, usually in combination, in a number of types, especially of applied body and rim adornos.

A. SURFACE FEATURES. (1) COLOR. Unslipped areas, rare on exteriors, with the exception of figurine heads, usually approximate Vinaceous Buff (17″′) or

Cacao Brown (9″i). Some darker, especially jar interiors, often a dirty Neutral Gray. Slipped surfaces, in good condition, Coral Red (5′) or Dragon's Blood Red (5′i), a shade darker. A very few specimens from the West and La Ceiba trenches have rim bands of a highly polished Pompeiian Red (3′i). In some rare cases (not more than six of more than one hundred restorable vessels and hundreds of sherds) the slip failed to "take" in such a way as to produce a pale gray color, approximating Pale Drab Gray (17‴f). No vessel is completely of this color; each one shows a small patch or patches of the typical red. Just why the slip failed to become red is uncertain. There is no doubt that the red patches are of exactly the same slip clay as the gray areas. Probably failure to become red was due to lack of oxidation in firing. Much of Bennett's gray ware[33] appears to be of this nature. Fire-clouding present to some degree. Many pieces show small dark gray fire-clouds, but surface color is quite uniform, excepting areas from which slip has worn off.

(2) Hardness. Unslipped surfaces average 3–. Slipped surfaces softer, averaging about 2.5.

(3) Evenness. Varies considerably in the mass of Valencia Red pottery. Larger vessels not as carefully smoothed as smaller pieces; in many cases carelessness is evident. Vessels show marked surface undulations indicative of smoothing in a moist, soft condition. Polishing marks are rare, that is, polishing tool marks as distinguished from smoothing marks. High polish lacking except in rare instances on small areas.

(4) Texture. Surface texture smooth, except where slip has worn off. Surfaces compacted, if not polished, so that inclusions do not protrude unless wear has occurred. None of the above applies to the bottoms of griddles or platters, apparently made in shallow depressions in the ground and quite unfinished.

(5) Luster. Chiefly dull. When new, some vessels may have been lustrous to a low degree. Presence of large quantities of mica in the red slip aids in reflection of light from the dull surface. Each tiny flake shines in the light, but there is rarely a polished area which is solidly lustrous.

(6) Slip. The red micaceous slip is thick, as a rule, easily seen with the naked eye in most cases. Rare cases of failure to become red. Mixture of mica in slip clay variable, but always some in Valencia Red slip as distinguished from La Cabrera Red ware which shows none.

(7) Defects. Roots, alternate soaking and drying have caused much damage. Slip shows a great deal of abrasion, much of it undoubtedly the direct result of use. Many large urns, incomplete in the ground, hardly retained more than a few square inches of slip. The most perfectly preserved specimens were those which showed no signs of wear and had been buried within an urn. Peeling not as common as abrasion but occurs on tops of griddles, where slip is especially thick.

B. PAINT. Formal painted design lacking. Two examples of the use of white paint on vessels which otherwise conform perfectly to the Valencia Red type (pl. VII, *8*). White pigment is soft, washes off easily.

C. PASTE. (1) Color. Neutral Gray, Slate Gray or often nearly black. Cacao Brown (9″i) rare but occurs on some griddles. Zones of this color, from 1 to 3 mm. in thickness usually flank gray interiors.

(2) Inclusions and Clay. Miss Shepard reports that temper does not differ in any important respect from that of La Cabrera Plain type ware. Two samples were sherd tempered, containing comparatively little mineral matter. One of these was a thick griddle sherd in which the sherd temper was very obvious. The other was a sherd from a common bowl-urn. Two others, from a smaller vessel and a griddle had mixed sherd and mineral matter; one had a few sherd fragments, but mostly mineral matter; one had only quartzite and sand. Three different clays are represented. One, found in three sherds, is dark and dense, containing a few fragments of diatomes and spicules which Miss Shepard believes may have been derived from sherd temper containing organic remains. Another clay, reddish in color, contains stray spicules and considerable fine mica. The third, light brown, contains more organic remains than any clay with the exception of La Cabrera Polished Gray ware but is characterized by a different assemblage of such remains. These differences in clay indicate different sources of material and considerable variation in methods of tempering, but the appearance of the results is identical, due primarily to uniform slip clay which contains no organic matter.

(3) Texture. Moderate to heavy. Pieces of all but the thinnest walled sherds, very coarsely tempered, with many inclusions over 1 mm. in diameter. Considerable variation in this respect; general impression that of extreme coarseness, especially in larger vessels, burial urns and griddles. Definitely granular, dense.

(4) Fracture. Irregular break, straight across, rough and granular.

(5) Hardness. Approximately the same as that of unslipped surfaces. 3–.

D. STRUCTURE. No doubt that coil method was used for both vessels and large figurines. Few vessels show definite surface undulations indicative of coiling, but many broken specimens show the marks of coils very clearly. These are either concave or convex fractured surfaces, depending on the way the particular vessel was broken.

E. SHAPE — Vessels. Shapes are well represented. One hundred and two whole or easily restorable vessels were recovered and recorded, plus many indicative fragments. Jars, bowls and griddles are the three major vessel shapes. Figurines classified separately. Each shape group may be divided into easily recognized sub-groups, nearly all of which are characterized by round, flat bases with walls flaring in similar manner. This, plus uniformity in surface treatment and decoration, demonstrates the homogeneity of the type. In illustrations of shape, ornament has

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[33] Bennett, 1937, p. 91.

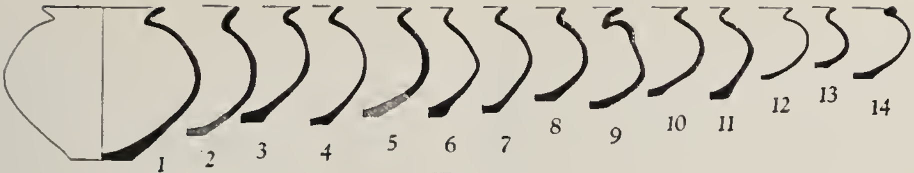

Fig. 19

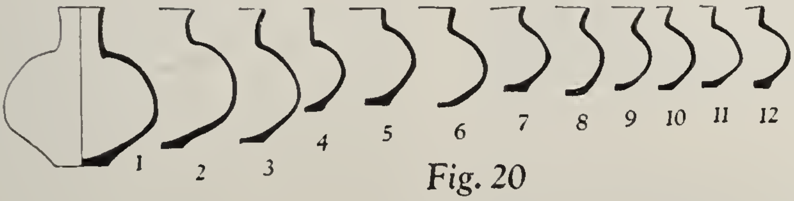

Fig. 20

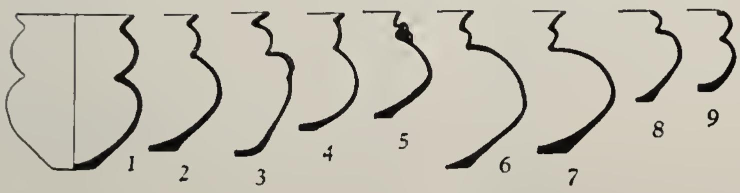

Fig. 21

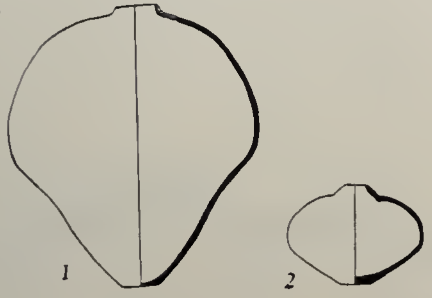

Fig. 22

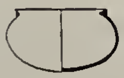

Fig. 23

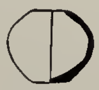

Fig. 24

Fig. 19. Valencia Red jars with low outcurved rims, ⅛. Fig. 20. Valencia Red high neck jars, *pimpinas*, ⅛. Fig. 21. Valencia Red bulging neck jars, ⅛. Fig. 22. Valencia Red narrow orifice jars, ⅛. Fig. 23. Valencia Red globular, round bottomed jar, ⅛. Fig. 24. Valencia Red small neckless jar, ⅛.

been omitted; functional handles have been drawn, but projections in the form of adornos have not been shown.

Jars. Four common major types and four rare shapes.

(1) large burial urns or jar-urns. (Pl. VI, *1–4*; see also figs. 14, *1*, *2*; 15, *lower*; 16, *5*, *6*.) Bottoms nearly all flat, about 10 cm. in diameter for all sizes. Walls flare sharply, often with a change in angle producing bulging shoulder (pl. VI, *1*). Sharp outcurve at top forms somewhat restricted orifice. Rims slightly thickened and rounded. Size varies from relatively small pieces (pl. VI, *3*), 40 cm. high by 50 cm. maximum diameter to huge specimens (large urn of Burial 52, fig. 14, *1*, *2*) and La Ceiba Trench Burial 4 (fig. 15, *lower*), nearly a meter in maximum diameter, 75–90 cm. high. Thickness of walls seldom over 1.2 cm. except at wall-base angle, with thickness of 5–6 cm. Rounded bottoms rare (pl. VI, *4*); only one other found in West Trench (Burial 3), but Bennett found a number,[34] and they are said to be more common from the west end of the lake, especially at El Charral. These jars were probably not made primarily for burial, since many show marked signs of use and reduction in size by smoothing of secondary rims, after breakage of original rims. Many burials were in incomplete urns.

(2) jars with low outcurved rims.[35] (Fig. 19, *1–14*; pl. VI, *5–10*.) All flat bottomed; all have restricted orifices. Bulges with applied strips (fig. 19, *9*; pl. VI, *8*) rare in this type. Handled specimen (fig. 19, *14*; pl. VI, *10*) unique, but similar small vertical loop handled specimens have been found by Requena[36] and Bennett.[37]

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[34] Bennett, 1937, p. 185.

[35] Bennett's (1937, p. 94) Types B1 and B2.

[36] Requena, 1932, pp. 111, 161.

[37] Bennett, 1937, p. 94.

(3) HIGH NECK JARS, *pimpinas*.[38] (Fig. 20, *1–12*; pl. VI, *11–13*.) Similar to preceding type in body shape, but with narrower orifice, elongated neck and less rim eversion. *Pimpina* is the local name. Bases flat, walls flare in same ways as jar-urns and outcurved rim types. None found in West and La Ceiba Trenches.

(4) BULGING NECK JARS.[39] (Fig. 21, *1–9*; pl. VI, *14–21*.) Nearly all specimens have outcurved rims. Width of orifices varies from very wide (fig. 21, *1*) to narrow; the latter are actually modified *pimpinas*. Basal shape in the same pattern as preceding jar types. Nearly all have human faces on the bulging neck.

RARE JAR SHAPES.

(1) NARROW ORIFICE JARS. Two specimens (fig. 22) from La Ceiba Trench typical except for very narrow orifice. Larger vessel from La Ceiba Trench Burial 1 lacks rim. Smaller vessel (La Ceiba Trench Burial 2) and identical orifice sherd from same trench are the same as two in Requena collection; and somewhat resemble Bennett's Type C2.[40] Probably a definite though rare type.

(2) GLOBULAR, ROUND BOTTOMED JAR. (Fig. 23; pl. VI, *22*.) From Burial 9. Lacks typical Valencia Red flat, thickened base; small handles from rim to shoulder very rare; one from similar jar from Los Tamarindos humus shows definite signs of use as cooking pot.

(3) SMALL NECKLESS JAR. (Fig. 24.) It has all the features of a *pimpina* without high neck. Rim smoothed, unmodified. Unique.

(4) SPOUTED JARS. Undoubtedly double-spouted jars were in use in late times at Los Tamarindos and other Valley of Aragua sites. Requena[41] illustrates at least one Valencia Red specimen. Bennett[42] found several specimens. Two spouts of Valencia Red ware found in Los Tamarindos humus (pl. VIII, *1*). Presumably shape of vessel and spout attachment with connecting handle were similar to those illustrated by Requena and Bennett and to La Cabrera Plain pieces (fig. 17, *13*).

BOWLS. Bowls may be divided into three major groups. There are also a few miniature bowls. All bowl groups must be more or less arbitrarily segregated, as must jar groups, since there are variations in shape from low, open bowls to those which might almost be classified as jars. The divisions are: (1) large open bowls, or bowl-urns, usually found containing secondary burials; (2) small, low, open bowls; (3) incurved rim bowls with somewhat restricted orifices.

(1) BOWL-URNS. (Fig. 25, *1–13*; pl. VI, *23*, *24*) exhibit the same flat bottom and general lower body shape as the jars. Very common, as at other sites.[43] Rims slightly incurved, most slightly thickened; most common is the type shown in figs. 25, *3* and *5*; type shown in figs. 25, *11* and *12* rare, does not occur on sherds. The slight modification of the rim by external trailing before hardening (fig. 25, *13*) is not characteristic of bowl-urns, but of the more pronounced incurved rim specimens. This bowl bears the marks of obliterated, applied modeled decoration, a feature lacking in other specimens. It is classified as a bowl-urn on account of its open orifice, large size and position as cover urn of Burial 19 (pl. I, *6*).

(2) SMALL OPEN BOWLS. Four groups, only one of which is numerous. Chiefly found in association with burials. All but one type have bottoms and flaring walls of typical Valencia Red style.

(a) *Outcurved Rims.* (Fig. 26, *1*, *2*; pl. VI, *25*, *26*.) Two specimens, distinguished from other flat bottomed open bowls only by slight rim eversion.

(b) *Slightly Incurved Rims.*[44] (Fig. 28, *1–21*; pls. VI, *27*; VII, *1–4*.) Commonest type. Variation in rim curve and thickening is apparent, but thickened rims (fig. 28, *1–11*; pl. VI, *27*; VII, *1*) and unthickened rims (fig. 28, *12–21*; pl. VII, *2–4*) are approximately equal when sherds are included, and there does not seem to be any stratigraphic significance in rim modifications. Most specimens bear rim adornos.

(c) *Low, Flat Bowls.* (Fig. 29, *1*, *2*; pl. VII, *5*, *6*.) Flat bottomed, but walls have very little upward curve. Only two specimens.

(d) *Round Bottomed Bowls.* Low, flat specimens (fig. 29, *3–5*; pl. VII, 7), only two found. Deeper specimens (fig. 27, *1*, *2*), one with unevenly finished rim, also unique.

(3) INCURVED RIM BOWLS.[45] (Fig. 30, *1–13*; pl. VII, *8–11*.) Usually somewhat globular, often with orifices so restricted, and height and width so nearly equal that they might be called jars, are rather common. The chief difference between this group and that of jars with outcurved rims lies in the general greater maximum diameter relative to height of these specimens, and in the fact that there appears to be a quite definite correlation between bowls of this shape and the characteristic incurved rim with trailed and smoothed depression just outside the lip. Characteristic flat base and flare of the lower walls is present here as in all important shape groups. Decoration in characteristic style is present on nearly all. Many were used as cooking vessels.

THREE TRUE MINIATURE BOWLS. (Pl. VII, *12–15*.) Found in the West Trench, all round bottomed. Two neatly made and decorated with adornos (pl. VII, *12*, *13*); the third (pl. VII, *14*) is crude. Pl. VII, *15* shows a small bowl-like depression in a round lump of clay with straight sides and a flat base. This may have been used for mixing pigments or for other purposes which required a small container steadily set.

GRIDDLES.[46] No whole griddles found, but fragmentary specimens had been used in several burials (Burials 2, 15, 52, West Trench 2). Sherds of others

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[38] Bennett's (1937, p. 94) Type C1.

[39] Bennett's (1937, p. 94) Type B3.

[40] Bennett, 1937, p. 95, fig. 7, 1.

[41] Requena, 1932, p. 125, center.

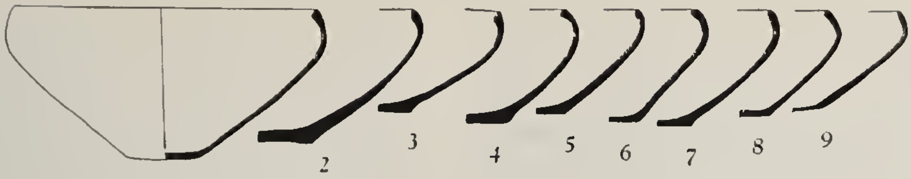
[42] Bennett (1937, p. 96), Type E.

[43] Bennett, 1937, p. 85.

[44] Bennett's (1937, p. 92) Type A1.

[45] Bennett's (1937, p. 92) Type A2.

[46] Bennett's (1937, p. 118) Comal platters.



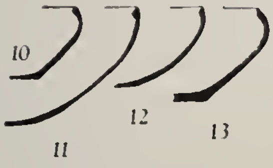


Fig. 25

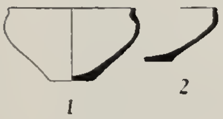


Fig. 26

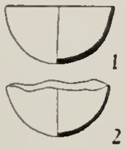


Fig. 27

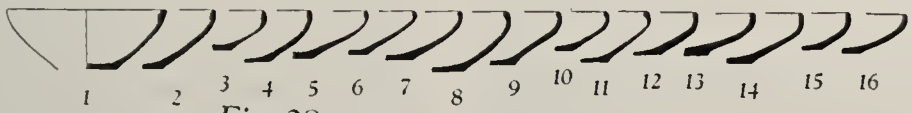
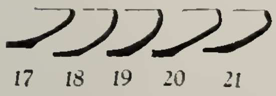


Fig. 28



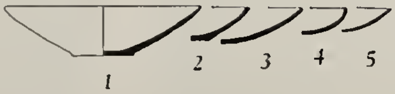


Fig. 29

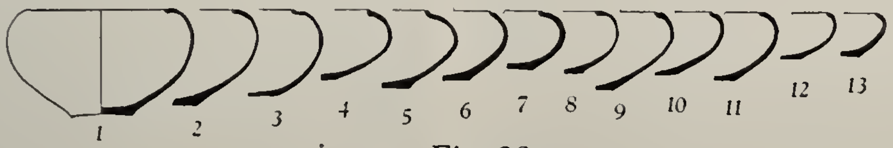


Fig. 30

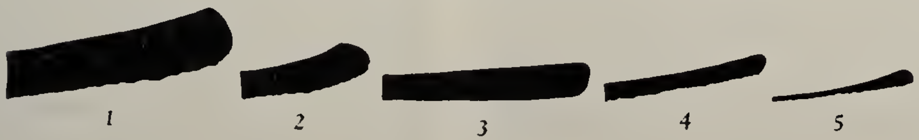


Fig. 31

Fig. 25. Valencia Red bowl-urns, ⅛. Fig. 26. Valencia Red open bowls with outcurved rims, ⅛. Fig. 27. Valencia Red round bottomed bowls, ⅛. Fig. 28. Valencia Red open bowls with slightly incurved rims, ⅛. Fig. 29. Valencia Red low, flat, open bowls, ⅛. Fig. 30. Valencia Red incurved rim bowls, ⅛. Fig. 31. Valencia Red griddle rim sections.

found in the humus. They are comparable to those of La Cabrera Plain ware, but there are examples of both thicker and thinner specimens (fig. 31). All were made with thickened rims. Thickness of body varies from .5 to 4.5 cm. All but one fragment are quite unsmoothed on lower side, apparently having been made in shallow depressions in the ground. Marks of sticks and pebbles can be seen, as well as the obvious irregularities which would naturally result from such a process of manufacture. Upper surfaces are heavily slipped. Pl. VII, *16* shows the largest and most nearly complete specimen, found in the urn of Burial 52 (fig. 13, *3*). Diameters vary from about 45 to 80 cm.; most approximately 50 cm. in diameter. One fragment shows obvious signs of use as a baking griddle.

Basal Supports. As a rule basal supports of any kind are lacking. La Cabrera excavations produced no whole or restorable vessels with such supports. However, true annular bases, high and flaring, sometimes with several perforations, supporting low open bowls of the common type,[47] have been found in the late deposits at the eastern end of the lake. None were found on La Cabrera. At Los Tamarindos one fragmentary base was found on the surface, just south of the main excavation. It had been thrown up out of a hole in the humus by Castillo's men. This piece (pl. VII, *17*), definitely of Valencia Red ware, is a true annular base with a number of perforations cut in it, forming a sort of lattice. Similar bases are illustrated by Requena and Bennett[48] supporting low open

[47] Requena, 1932, p. 159; Bennett, 1937, p. 95. Type D1.

[48] Requena, 1932, p. 159; Bennett, 1937, p. 95. Type D3.

bowls. The Los Tamarindos specimen was attached to a flat bottom similar to those of ordinary bowls (fig. 28, *1–21*; pls. VI, *27*; VII, *1–4*). Tripod vessels, if they were made at all in Valencia Red ware, were exceedingly rare. Linné lists Lake Valencia as one of the localities in which tripods have been found.[49] This is based on a single specimen illustrated by Von den Steinen,[50] who stated that it was unique and apparently a tripod. From the illustration this is not clear, nor is it certain that the piece is of Valencia Red ware. Beyond this there is no evidence for the presence of tripod vessels in later times in the Valley of Aragua. I have never seen such a vessel in any collection of material of Valencia Red type. Leg-ring bases are absent.

Handles. True handles are very rare. There is evidence that double-spouted jars were made with connecting strip handles (pl. VIII, *1*). Aside from these there are a few examples of small vertical handles, set close to the rim on two sides of a small jar (fig. 23; pl. VI, *22*). This specimen has four such handles. One other similar small vertical handle, presumably from the same type of jar, is the only other true handle to be found among Valencia Red specimens. The characteristic adornos on bowls with incurved rims (pl. VII, *8–11*) were presumably used as handles. They are shown in more detail in pl. VIII, *12–31*; all but one have holes through them.

F. DECORATION. Done almost exclusively by means of modeling, incision and punctation, usually in combination. The use of paint was, apparently, very rare. Fugitive white paint was used on two vessels; one a low open bowl (outlined in fig. 28, *5*), has a 4 cm. band around the outside wall underneath the shoulder; the second painted specimen (pl. VII, *8*) has thin white stripes running vertically from the rim over the shoulder. Both pieces were found in the West Trench. Slip was sometimes used in combination with modeling and incision to enhance decoration. This was done in an informal way; examples are pointed out as they occur.

The following classification covers the range of techniques and styles and permits correlation with shapes.

I. Human faces modeled on the necks or spouts of vessels. In this the wall is more than a background; it is part of the effigy.

II. Low relief appliqué; may or may not be incised or marked with punctation.

III. True adornos, in higher relief, on walls or rims, often depicting human or animal figures.

IV. Simple incision and punctation not in association with modeling in relief.

The first three groups are all characterized by additions to, and alterations of, the surface. The last involves no additions.

I. Human Faces on Necks or Spouts. These confined to bulging neck jars wherever it is possible to determine shape. Seven of the nine restorable bulging neck jars are so decorated (pl. VI, *14–21*). Pl. VIII, *2* and *3* show additional examples, broken from smaller vessels; other fragments were found. Modeling varies little. Eyes are coffee bean or double punch type, both made by incising or punching an oval applied node. Noses are roughly modeled, with punctate nostrils. Mouths are usually coffee bean or punctate elements, similar to eyes. Many specimens show eyebrows, either modeled (pl. VI, *15*, *18*) or punctate (pl. VIII, *2*, *3*). Sometimes modeled brows were marked with punctation (pl. VI, *18*). Other features may or may not be present. The incised side projections of various shapes visible in pl. VI, *14*, *15*, *20*, *21* are probably meant to represent ears. Hands supporting the head (pl. VI, *14*, *18*) are not common, but do occur on about one-fifth of the specimens. Pl. VI, *16* is exceptional; here conventionalization has left only two double incised nodes set on either side of a short cross-incised applied strip; this presumably represents the face. The same features are repeated on the other side. Pl. VIII, *3* also shows a highly conventionalized face, with very long eyes, the nose a tiny double punctate node, brows picked out by fine punctation. A fine well polished red slip is confined to the top of the rim and probably covered the lower part of the vessel. The face and adjacent areas are unslipped. The same is true of the face shown in pl. VIII, *2*; here, however, there are two "tears" in red slip flowing from each eye. Pairs of faces, on opposite sides, are rare; they occur on the piece shown in pl. VIII, *3*, and one identical to it, and on those shown in pl. VI, *14*, *16*. Fuller representation of the figure was apparently never attempted on vessels. The nearest approach to a full figure (pl. VI, *18*) shows arms, a punctate node, possibly representing the navel, and a hastily incised area above this and between the arms below the chin. Modeling on the two vessel spouts found (pl. VIII, *1*) similar to that of effigy faces; it is markedly cruder in execution than the spouts of La Cabrera Plain or Polished Gray ware.

II. Low Relief Appliqué. Usually modified by incision and punctation; occurs on jars with outcurved rims, bulging neck jars and bowls, especially of incurved rim type. In its simplest form this type of appliqué work consists merely of massed nodes; simple cone-shaped pellets of clay applied in numbers. These have been found only in two cases, on the lower body of a bluging neck jar (pl. VII, *18*) and on a sherd from a small outcurved rim jar. Small punctate nodes used between the two faces on the small effigy jar (pl. VIII, *3*) and its identical mate. Short applied strips, marked with punctations at the ends, cross-incised, or both punctate and incised were commonly used in the same way (fig. 21, *2*; pl. VI, *16*, *21*). Pl. VI, *25* shows a bowl with four pairs of short punctate applied strips, with extra punctations between the strips of each pair. Much the same sort of decoration is present in damaged condition on the bowl-urn shown in outline in fig. 25, *13*. Low open bowls of the usual type were rarely so decorated (pl. VI, *27*). Larger vertical appliqué punctate strips

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[49] Linné, 1929, map 7.

[50] Von den Steinen, 1904, p. 106, fig. 17.

(pl. VII, *11*), uniformly spaced on shoulders of incurved rim jars, are fairly common, although they do not occur on more than half of the bowls of this type. The same decoration, carelessly applied, was used on the handled jar shown in pl. VI, *10*; punctations were not uniformly spaced and are lacking on large parts of each strip. The best examples (pl. VII, *11*) are marked so that each strip has the appearance of a chain. An unusual specimen (pl. VII, *19*) is a large sherd from the shoulder of a large but rather narrow mouthed jar, presumably of the outcurved rim type. An applied strip, neatly modeled in triangular cross section and set with small strips terminating in punctations, producing the effect of a cogwheel, was placed around part of the upper shoulder. The cog-wheel strip terminates at the right hand side, where there is a luting mark. Below the slightly elevated upper shoulder there is a semi-lunar irregularly incised area, with one punctate node at the bottom. Possibly the jar was made with a modeled face above this area, similar to that shown in pl. VI, *14, 15*. The area of plastic decoration was not slipped, but traces of the red micaceous slip can be seen just outside the incised area.

III. True Adornos. Modeled projections in high relief, placed on walls or rims. Some productions of the rims of bowls may have little vertical relief but are classified as adornos since they modify the rim to a marked degree. Adornos may be primarily classified on the basis of their positions below or on the rim. There are five general types of the below-rim or side-wall group, an equal number of the rim group. Subdivision of the major categories is difficult in many cases. Variation is very great; there are only a few types composed of strikingly similar specimens, especially among rim adornos.

The side-wall group[51] may be classified as follows: (a) Side-wall "bulges" with applied strips; (b) incised and punctate knobs of irregular shape set well below the rim; (c) handle adornos, set high on shoulders; (d) crude animal heads, facing out, set just below rims; (e) figurines, human or animal.

Less clear cut is the rim group; it is not always apparent, for instance, whether heads are meant to depict human beings or animals; conventionalization is extreme. Classification has been based on position with respect to the rim and general structure. Definite types are apparent within the major group; these are: (a) simple rim projections; (b) wide rim adornos; (c) heads, facing out from the rim, usually in pairs; (d) heads or figures facing in over the rim; there are bird, bat and human head sub-groups; (e) irregularly shaped knobs, incised and punctate; some are apparently highly conventionalized heads.

(1) side-wall adornos are very much less common than rim types. They occur, with the exception of the crude head group, exclusively on jars and incurved rim bowls.

(a) *Hollow bulges*[52] in the vessel wall set with plain, vertical applied strips, usually three in number (figs. 19, *9*; 21, *3*; pl. VI, *8, 17*). There are normally four such bulges on a vessel. Found most commonly on bulging neck jars and outcurved rim bowls as well; one bowl sherd from the West Trench shows this type of adorno; Requena[53] illustrates several specimens.

(b) *Side-wall knobs*,[54] incised and punctate, set well below rims, are more variable. Large burial urns as a rule are undecorated; two from the West Trench had small low incised knobs (pl. VIII, *4*), one on each side. The position of similar adornos may be seen on a large burial urn illustrated by Requena.[55] Of the remaining examples, all but three battered specimens of which are illustrated (pl. VIII, *4–11*), only one (pl. VIII, *5, 6*) had certainly been placed on outcurved rim jars. This crude head, with punctate node eyes and nose, and slit mouth, is on a definite jar sherd, also probably of the outcurved rim type. The three other illustrated specimens (pl. VIII, *7–11*) vary in details of shape, incision and size, but are essentially similar. In one case (pls. VI, *5*; VIII, *11*) the simple knob is surrounded by an irregularly incised area set with three punctate nodes. The outlined incision area is a relatively common decorative feature in association with modeled decoration. In all cases these adornos are in pairs, on opposite sides of the vessel.

(c) *Handle adornos*,[56] by far the most numerous side-wall group. All but one (pl. VIII, *12, 13*) are perforated (pl. VIII, *14–31*). All whole specimens show that one on each side of the vessel was the rule. The unperforated example (pl. VIII, *12, 13*) is somewhat aberrant, since it is the only one which was found on the wall of a bowl-urn (fig. 25, *6*). It is actually a slightly modeled lug. The remaining illustrated specimens represent a third of the total number of such adornos. They appear to have been invariably applied to the shoulders of incurved rim bowls, just below the characteristic depression on the rim. Simpler specimens (pl. VIII, *14, 15*) have a very small aperture under the arch of the body of the adorno, and the modeling is not relieved by incision or punctation. There are several similar pieces in the collection. Pl. VIII, *18, 19* is more elaborate, showing the characteristic deep punctations of some larger specimens. Pl. VIII, *16, 17* and pl. VIII, *22, 23* lack punctation but show the high central projection rising from the many-knobbed base, which gives the whole some resemblance to a conventionalized frog. The flat, broad top of the central projection is less common than a top marked with punctation. Pl. VIII, *20, 21* and *24–26* illustrate the most usual type, although every pair varies somewhat in detail from every other. Essential features are the low arch with massed punctate nodes at the base and the central pitted projection. Half the handle adornos are similar to these two. Pl. VIII,

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[51] Bennett's (1937, p. 97) Body Adornos, Type A.

[52] Bennett's (1937, p. 105) Type F.

[53] Requena, 1932, pp. 81, 121.

[54] Bennett's (1937, pp. 97–99) Type A1.

[55] Requena, 1932, p. 122.

[56] Bennett (1937, p. 106) classifies these as handles, Type A with several sub-divisions.

*27, 28* is nearly the same, except for the flattened "head"; this specimen resembles a frog more strongly than do any of the others. Unfortunately, the "head" is slightly broken so that the original condition cannot be ascertained. Pl. VIII, *29–31* is also a unique specimen. It probably was meant to represent a bird; the beak has been broken off. Punctate appliqué strip decoration was used as well. It may be seen (pl. VIII, *29*) that this adorno has been attached in two places by perforation of the vessel wall, suggesting its use as a handle which was intended to stick firmly. All other specimens were simply luted to the surface and pull off rather easily.

(d) *Crude heads facing out*, attached just below rim, are represented by only two specimens (pl. IX, *1–4*), attached to bowls, probably of the low, open variety. The two specimens are similar; each has a coffee bean element set just below the neck. Eyes in one case are punctations (pl. IX, *1*, *2*), pitted shoe buttons in the other. Mouths are simple cross slits.

(e) *Figurine adornos.* (Pl. IX, 7, *8*, one of the two from Los Tamarindos.) Rare on La Cabrera, but represented from other parts of the lake basin.[57] Face lacks all features but the eyes, simple coffee beans. The body is solid, marked with punctations and incision. It was attached by a tenon through the vessel wall (pl. IX, 7). Both specimens had been placed on jars, but there is no evidence with respect to definite shape. Pl. VI, *6* illustrates a jar which once had two figurine adornos of a somewhat different sort. The arms of a figure, two applied semi-circular strips, spring from an area from which a head or body has broken.

Requena[58] illustrates a jar with two frogs climbing the upper shoulders, and an incurved rim bowl with a single figure, human or animal, crouched just below the rim.[59] He shows none which indicate the position of the solid, high relief, conventionalized type.

(2) RIM ADORNOS are the most characteristic decorative feature of Valencia Red type pottery. The five major types are in some cases divisible into stylistic sub-types. They are found exclusively on low, open bowls, most of which have, or show signs of originally having had, one or two pairs of these modeled decorative elements.

(a) *Simple projections of the rim*,[60] or modeled additions to the rim in various forms, are not numerous. Simplest form is a pinched out rim marked with incision (pl. VI, *26*), set in four places on the rim. Rim with five short pinched projections and short diagonal incisions (pl. IX, *9*, *10*). Uncertain how many times this is repeated. Same is true of the low tripartite incised adorno (pl. IX, *11*, *12*). Both these examples are unique. Pl. IX, *5*, *6* is another unique specimen, one of a pair. More elaborate is the double projection adorno (pl. IX, *13–15*) with cross-incised crests, punctate and incised base, also unique. Pl. IX, *16* is a more common type; others are not identical in detail, but there are several specimens from La Cabrera and elsewhere in the valley with the same low rim projection set with nodes and punched at random. Simple rim projection modeled to represent a face (pl. IX, *17*); mouth is the only essential feature lacking. Occurs on two sides of a bowl (pl. VII, *6*) with two small incised pinchings of the rim equally spaced between. There are no other very similar pieces from La Cabrera.

Pl. IX, *18* is another unique adorno; varies from the normal in that it was placed at three equidistant points on the rim of a very low bowl (fig. 30, *9*). It represents a face, so highly conventionalized that the two coffee bean eyes alone remain. Random incision below is a usual feature.

(b) *Wide rim adornos*; position on rim essentially as in preceding group. The term "wide" applies to the adorno rather than to the rim. It was first used by Bennett,[61] who found a considerable variety. The most usual form is shown in pl. IX, *19*; drawing was based on the fragment shown in full shading. The rest, including nose, is based on specimens from the eastern end of the lake in Requena's collections.[62] These are often attached in pairs to low bowls on annular bases, although they may on bowls with no such supports. The two "ears," above the long "eyes," are turned outwards, so that viewed from above, the adorno is semi-circular. There is no doubt that this specimen was attached to the rim in two places, leaving a slit between rim and adorno, a feature often seen on whole specimens. Only one fragment of an identical adorno was found, in the La Ceiba Trench humus, close to the illustrated specimen.

Pls. VII, 7; IX, *20*, *21* is a much smaller wide rim adorno, characterized by some of the same features. It does not represent a conventionalized face but does have the same general form and is marked with same type of fine punctation. A less definite form is shown in pl. IX, *22*, *23*. The adorno is wide and set back slightly from the rim, but outlined "ears" are lacking. Pl. IX, *24*, *25* show details of decoration of a miniature bowl (pl. VII, *12*) found in the West Trench. Here the face is well marked and "ears" turn back. Another variation of the wide rim type (fig. 25, *6*) bears no facial representation, but the essential features of form are present, as well as the fine punctations which characterize the larger, commoner type. Pl. IX, *28* is more than half reconstruction; "nose" is not at all certain, but second round "eye" was probably present, since most adornos and other modeled features are bilaterally symmetrical. Wide rim adornos were all found in the West or La Ceiba Trenches, and there is every reason to believe that their occurrence there is chronologically significant.

(c) *Small modeled heads, facing out from the rim*.[63] This and the following types are in higher relief, standing out more distinctly from the rim than the preceding ones. Heads of this sort are paired (fig. 28, *5*; pl. IX, *29*, *30*). Two pairs were placed on opposite sides of low, open bowls. Two similar pairs were found, and a single specimen, which may or may not have had a close-set mate. They probably represent birds; all have beaks, rounded heads and round, pitted shoe button eyes. The incised area beneath does not always occur.

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[57] Bennett's (1937, p. 105) Type E; La Mata specimens are less crude.

[58] Requena, 1932, p. 121.

[59] Requena, 1932, p. 75.

[60] Bennett's (1937, p. 105), Type D.

[61] Bennett, 1937, p. 102; figs. 7, m, 10. Type C.

[62] Requena, 1932, pp. 87, 93, 159.

[63] This and the following types, modeled heads facing in from rim, is in general comparable to Bennett's (1937, pp. 100–103) Type B and its sub-types.

(d) *Heads or heads with some representation of the body, facing in from rim.* Very much more common than preceding type. Usually two on a bowl, on opposite sides. Bird heads, or what appear to be bird heads, form the first sub-type (pl. X, *1–10*). There are a half dozen additional similar specimens in the collection, although no two are identical. Most of them were placed above some very small representation of the body; pl. X, *3*, *4* have definite wings and a tail; others show less. Most have crested heads, usually double antero-posterior cross-incised crests (pl. X, *5–8*). Round head with no crest (pls. VII, *1*; X, *1*, *2*). Pls. VII, *2*; X, *9*, *10*, an unusual form; it may not represent a bird; and the double lateral crests are unique. Eyes are uniformly round, pitted shoe buttons except in the case of pl. X, 7, *8*, where they were tube punched. Three specimens of a "bat head"[64] group (pl. X, *11–17*) were found, all in the West or La Ceiba Trenches. None are attached to whole bowls, but all had apparently been on bowl rims. In each case the nose is, or was, turned up. Pl. X, *11*, *12* and *13*, *14* seem more definitely bat-like than pl. X, *15–17*, probably due to their ears, and the lack of a headdress. The latter is composed of a pair of highly conventionalized birds facing each other. Again eyes are uniformly round, pitted shoe buttons set into punched holes. The shoulder incisions to be seen in pl. X, *11* may be part of a wing representation. There are specimens from the region representing bats with broad wings in "steps" along the rims of bowls, incised in the same way.[65] Bat adornos are far more common from sites at the eastern end of the lake. "Human head" sub-group of inward-looking head adornos[66] (pls. VII, *4*; X, *18–25*). Pl. X, *18*, *19* is not as highly conventionalized as others and differs from them in lack of a pitted head projection. Those shown in fig. 28, *11*, *19*; pls. VII, *4*; X, *20–23* are almost identical; a couple of similar specimens broken off from bowls were found as well. Eyes are double-punched, as is the mouth; nostrils are not always present (pl. X, *22*, *23*). Pl. X, *24*, *25* can hardly be called a human head but is similar to the others in position and style. It has the same high pitted projection, but there is a "snout" below it which the others lack; possibly it is a very conventionalized face. Among specimens not illustrated there is a small figure, so badly broken that it is impossible to tell whether it is meant to represent animal or human. This adorno faces in over the rim and has legs, thin applied strips with incised toes.

(e) *Irregular modeled, incised and punctate knobs* from a rather heterogeneous group of specimens, none of which represents a definite sub-type, illustrative of the variation characteristic of Valencia Red type modeled decoration. Pls. VII, *3*; X, *26*, *27*, a curious double-crested projection with "eyes" at the sides. Two "arms" with incised "fingers" hold up the whole, meeting at a punctate node. If this was meant to represent a figure it was conventionalized beyond recognition. Knob shown in pl. X, *28*, *29* has apparently no conventionalized features; pl. X, *30*, *31* probably represents a face but is better classified here rather than with the more naturalistic heads of the third type. Both show relatively little modification by the addition of strips, nodes, incision or punctation. Pl. X, *32*, *33* is even less definite, although eyes and nose may have been intended. Pl. X, *34*, *35* displays somewhat similar side crests; it too may be a stylized face; the presence of so many tube punctations is unusual on adornos.

IV. Simple Incision and Punctation Not in Association with Modeled Elements is Rare, but does occur to a certain extent. Two bowl-urns, one that of Burial 19 (pl. VI, *24*), the other of Burial 36, were incised with three waving lines encircling the bowl just below the rim, one above the other. A short arc, curving down from the rim, fills the space above each depression in the wave. These are the only examples of pure incised design, although incision was commonly used in connection with other techniques. Pure punctate design is also rare. Pl. VI, *9* shows an outcurved rim bowl with a series of tube punctations around the neck. This simple type of decoration occurs only on two other fragmentary specimens of the same type of jar.

FIGURINES. The La Cabrera humus deposits produced twelve complete or restorable human, or apparently human, figurines, seven figurine heads and two bodies without heads. Only two definitely animal figurines and one animal head were found.

Classification of human types is based on posture, body structure (whether hollow or solid) and style, especially of heads. Sex is always female or is not indicated; there are a few sexless specimens.

Shapes. There are three primary postural types: standing, sitting and legless. The latter may be sexless, but otherwise do not differ in style; there are only three of the type among the La Cabrera specimens.

Standing figurines number seven — three solid, four hollow bodied. Sitting number four and legless two; all these are hollow bodied.

There are four head types: oval, rounded, rectangular and crudely modeled. Of these there are eleven, four, three and two examples respectively. Considering these characteristics in combination, there emerge certain more or less homogeneous types.

solid bodied standing figurines[67] are not common. They are represented by one fragmentary, fat-legged specimen, a small, crude headed, sexless specimen (pl. VII, *20*), pierced laterally for suspension and a badly battered small oval headed one. The evidence from the broken heads and bodies points to the fact that solid heads and bodies were relatively rare. There are none among seated or legless specimens from La Cabrera, although they have been found in other sites.

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[64] Bennett (1937, p. 102, fig. 10) classifies similar adornos with the wide rim group, Type C.

[65] Bennett, 1937, fig. 10.

[66] Bennett's (1937, p. 102) Type B2b, cylindrical projections.

[67] Bennett's (1937, p. 111) Type A2.

HOLLOW BODIED STANDING FIGURINES,[68] often exaggeratedly female, form the most usual type from the whole lake basin. Four whole specimens were found (pl. VII, *21–24*) ranging in size from 46 cm. in height (pl. VII, *21*) to 9.5 cm. (pl. VII, *24*). All have oval heads; seven other oval heads from hollow bodies show that oval heads and hollow bodies, probably most of them from standing specimens, were made most frequently in combination. Broken off oval heads are similar in style to the illustrated specimens. The largest (pl. VII, *25*, *26*) was probably part of a standing figurine similar to that shown in pl. VII, *21*. Heads, bodies, arms and legs are never in proportion. Legs are short, thick and squat, round and flat bottomed; modeling to depict feet (pl. VII, *24*) is present only on this specimen, rare from other sites. Hips are characterized by marked roundness and breadth. Arms, present on the larger specimens, are applied strips, usually clasped over the breasts. Fingers are indicated by three or four strips or incision. Arms which stand away from the body (pl. VII, *25*, *26*) are less common, but may be seen on specimens from other localities in the valley.[69] Navels are usually indicated by a simple depression, sometimes by a punctate node (pl. VII, *22*, *24*). This specimen is pierced through the side walls for suspension.

SITTING FIGURINES, ALL HOLLOW BODIED,[70] are of two types, the bent kneed (pl. VII, *27*, *28*) and the spread-legged (fig. 32, pl. VII, *29*, *30*). The bent kneed type is probably very rare; only one was found on La Cabrera, and there are very few others from other sites.[71] The Los Tamarindos specimen is similar in most details to standing, oval headed examples, but the posture (pl. VII, *28*) is quite different. The knees are bent, hands rest on them; the back is greatly enlarged and is pierced for suspension. Spread-legged figurines (fig. 32; pl. VII, *29*, *30*) were found only in the West and La Ceiba Trenches. They are flat bottomed, with short, solid, spread legs. These have broken from the specimen shown in pl. VII, *29*. Fig. 32 shows the only figurine with hands supporting the head found on La Cabrera; it is also the only rattle bodied figurine. Heads of both these complete specimens are rounded, both laterally and antero-posteriorly.

LEGLESS FIGURINES[72] are either flat or round bottomed. Flat bottomed specimens, of which there are two, are both sexless; one (pl. VII, *31*) has a simple round body and oval head. The other is very crude, with a shapeless modeled head. The round bottomed figurine (fig. 33) is unique from the Valley of Aragua, as far as I can determine. It has no other bodily feature but the head, which is rounded.

FIGURINE HEADS, as noted above, are mostly of the oval type; these are broad laterally, thin at the top (pl. VII, *26*). Bodies were made by coiling; heads were luted on separately. Rectangular heads are similar, with angular corners. None of the three fragmentary ones found on the peninsula are worth illustrating.[73] All were on hollow bodies. Rounded heads are not compressed antero-posteriorly. Crudely modeled heads are confined to small crude specimens. They are comparable to Bennett's Modeled Head Type.[74] Lacking on La Cabrera are the broad "canoe-shaped" heads which occur at the eastern end of the lake, often supported by arms and hands.[75] They are on large, hollow bodies, or spread-legged seated figurines. Also lacking are heads with marked lateral concavity.[76]

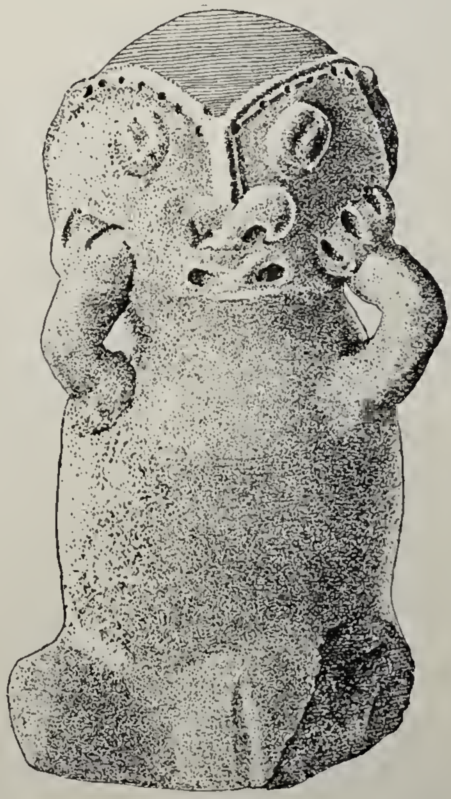

FIG. 32. Valencia Red spread-legged figurine, hollow. Natural size.

FIGURINE DECORATION, STRUCTURE AND FINISH are all typical of the Valencia Red type. All specimens were slipped in part, although the face was usually left unslipped under the eyebrows. Bodily features have been discussed. The modeling of heads and faces is fairly uniform. There are crude specimens (pl. VII, *20*) on which the face is represented by eyes and nose only, flanked by pierced "ears," but the remaining specimens are more fully modeled. Eyes are of coffee bean or double punch type with no exceptions. The eyes of pl. VII, *30*, the only specimen which may not be human, are double punched nodes set into circular depressions. In most cases there are modeled eyebrows, sometimes marked with punctations; these diverge from the root of the nose. Noses are well modeled, sometimes with flaring alae and punctate nostrils. Two specimens have pierced septi (pl. VII, *23*, *25*, *26*), possibly for nose rings. Ears, usually pierced, are modeled projections, pierced from one to four or five times, often with cross-incised edges. Mouths are normally simple coffee beans or double punched nodes. The tops of most heads were left smooth; the cross-incised and punctate head of pl. VII, *21* is exceptional. Decoration at the neck is not uncommon; pl. VII, *21* shows incised chevrons and punctations, fig. *33*; pl. VII, *24* short applied punctate strips as "necklaces." Pl. VII, *25*, *26* is the largest and best modeled head. The chin was incised with zigzag and straight lines, running horizontally on the sides, vertically in the center. Possibly this was intended to represent tattooing. Requena illustrates similar markings on figurines.[77]

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[68] Bennett's (1937, p. 110) Type A1.

[69] Requena, 1932, pp. 59, 63, 73.

[70] Bennett's (1937, p. 113) Type CI.

[71] Requena, 1932, pp. 57, 67; Bennett, 1937, p. 117, fig. 13.

[72] Bennett's (1937, p. 112) Type B.

[73] See Bennett, 1937, fig. 13, c.

[74] Bennett, 1937, fig. 13, e.

[75] Requena, 1932, pp. 39, 41, 57; Bennett, 1937, p. 114, figs. 12, 13.

[76] Requena, 1932, p. 71.

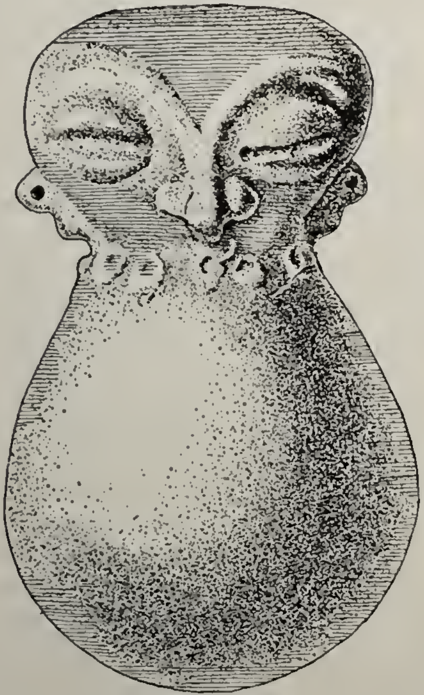

Fig. 33. Valencia Red round bottomed figurine, hollow. Natural size.

Animal Figurines are rare. Only two whole specimens and a head were found on La Cabrera. The head (fig. 34), found in the Los Tamarindos humus, has a long pointed snout, coffee bean eyes, modeled and incised ears. The body to which it was attached was hollow. The two unbroken specimens, found in the La Ceiba Trench, one in the urn of Burial 4, are almost identical (pl. VII, *32*, *33*). They are fat-bodied, short-legged little animals, with protruding snouts and large neatly made coffee bean eyes, topped by brows in fine punctation. The mouths were set with quartz pebbles to represent teeth (pl. VII, *32*); in the other these have fallen out. Both bodies rattle; tails are strips attached at both ends to the body. No examples of grotesque animal figurines were found. Several are illustrated by Requena.[78] Animal figurines are rare in the valley and do not present the same uniformity exhibited by human types.

**Miscellaneous Objects of Pottery.** Aside from vessels and figurines, a small number of miscellaneous objects was found. Most numerous are discs of clay, unslipped and carelessly smoothed (pl. XI, *1*, *2*). These vary in diameter from 10 to 16 cm., in thickness from 1 to 2 cm. Eight found neatly piled together in Burial 16. Some half dozen others, including fragments, came from the Los Tamarindos humus, two from the urn between La Ceiba Trench Burials 2 and 3. One specimen has been drilled (pl. XI, *2*); another was made from a heavy griddle sherd, rounded by grinding the edges. This was still slipped on one side. Their use is speculative; it has been suggested that they were employed as turnettes in manufacturing pottery. Some weight is lent to this hypothesis by the fact that a number of quartzite pebbles found near them in the same burial may have been used as polishing stones. In size they would also be satisfactory for this purpose. They could also have been used as covers, as Bennett suggests.[79]

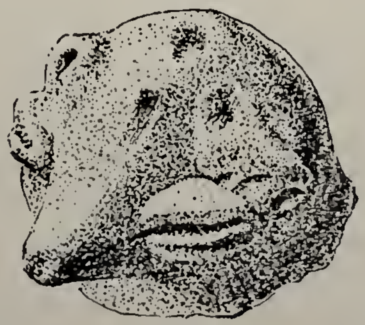

Fig. 34. Valencia Red animal figurine head. Natural size.

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[77] Requena, 1932, pp. 41, 73.

[78] Requena, 1932, pp. 53, 55.

[79] Bennett, 1937, p. 120.

One drilled sherd was found in the West Trench humus. It is of Valencia Red ware, but similar in size and shape to that of La Cabrera Plain (pl. III, *13*).

The West Trench produced a small stool-like object of Valencia Red ware. Similar to one illustrated by Requena,[80] it consists of a slightly concave slab of clay 12 cm. long by 7 broad by 1 thick, mounted on solid round legs 5 cm. in height. The corners are rounded. It is not unlike the stools which support seated male figurines found in the Andean region of Venezuela.

None of the small fat-bellied amulets decorated with modeled heads and applied strips, sometimes animal effigies,[81] definitely of Valencia Red type, were found on La Cabrera. Sometimes these are ocarina-like whistles. The same applies to solid roller stamps,[82] cut to produce various geometric designs.

## *STONE*

Stone material is classified and described by category; the occurrence of the various types with respect to Los Tamarindos levels is pointed out. Identifications of material were very kindly made by Dr. E. S. Larsen, Jr., of the Department of Mineralogy, Harvard University.

Work in stone was always done by grinding; chipped stone work is absent. The only suggestion of chipping was presented by the presence of less than a half dozen small, irregular chert flakes. Not a single artifact was found which had been shaped or retouched by chipping.

**Celts.** Celts of varying sizes form the most numerous group of stone material. It is not probable that the smaller specimens were hafted for use as hatchets, but their shape is often almost exactly the same as that of larger ones. It seems likely that very small celts were used as scrapers or chisels; the term scraper is seldom used to describe ground stone objects, but in view of the lack of chipped stone and bone scrapers I believe it is highly probable that small celts were used as such.

Material for large celts was primarily a uralitized peredotite, a very tough rock. It is probable that water worn pebbles were selected from stream beds. Other materials used for celts are metamorphic diorite, tough, slaty rock (for smaller specimens), schist, and in one case, nephrite.

Classification of the forty-seven celts found on La Cabrera is rendered difficult due to the worn out condition of many specimens. Thirteen of the total were used so heavily that both edge and poll were worn down, making identification of their original shape uncertain. This makes comparison with the few complete specimens of quite different type impossible.

There are two primary types: non-parallel and parallel sided. The first is by far the commonest. It may be subdivided conveniently into groups consisting of large and small specimens.

Large Celts with Non-parallel Sides. Fifteen cm. may be taken as the average length of this group, although there are only two whole specimens. Worn down examples (pl. XI, *9*, *12*) were probably of similar size, judging from their shape; some were probably as much as 20 cm. in length. There are twenty-two non-parallel sided specimens, and of this number the two complete specimens are of quite different type. One (pl. XI, *8*) is straight sided; the other (pl. XI, *10*) has a marked flare of the sides just below the edge, with the poll cut obliquely. In cross section they are both rectangular, well rounded at the corners. Here are obviously two entirely different types. Of the twenty broken specimens, five showed flaring edges, but lacked poll (pl. XI, *11*); one showed the oblique poll but had broken in the middle so that presence or absence of flare could not be distinguished; and one showed a rounded poll.

All flaring edge specimens were found in the lower levels, none above the lower half of the second meter. All specimens of oblique poll were also confined to the lower levels. The humus deposits of all trenches produced only five large celts, broken or unbroken (pl. XI, *8*, *9*). Among these were the two rounded polls. However, of the nineteen large celts from the lower levels, only seven show more than non-parallel sides. Thus, the evidence points to the stratigraphic significance of large celts, but is not conclusive.[83] It is doubtful, for instance, whether all large celts had flaring sides, but at present this is impossible to prove. The same applies to the oblique poll. There is no doubt that large celts were very much less common in the upper levels, which may account for the apparent lack of specialization.

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[80] Requena, 1932, p. 107.

[81] Requena, 1932, p. 145; Bennett, 1937, p. 120, fig. 14.

[82] Requena, 1932, pp. 43, 45.

[83] Bennett (1937, pp. 124–127, fig. 16) found 16 large wedge-shaped, straight-sided, round-butted celts at La Mata, chiefly in the upper part of the mound.

SMALL CELTS WITH NON-PARALLEL SIDES. For this group the situation is very much clearer; all specimens are whole, or nearly so; wear does not prevent classification. Numerically, they are distributed in a manner quite the reverse of large types – that is, of twenty specimens, only one was found in the lower levels.

Length varies from 5 to 9 cm. The usual shape of the upper level specimens is illustrated in pl. XI, *13–17*. Edges are slightly convex, polls rounded. Cross sections are nearly oval; these are petaloid celts with the exception of a few flatter specimens.[84]

The nephrite specimen (pl. XI, *18*), found in Burial 9, is unique; it is beautifully made, much flatter and thinner than the other upper level small celts. Edge and poll are parallel, slightly oblique to the main axis of the celt. This specimen shows no signs of wear whatever and was probably not made for use in daily life.

The single lower level specimen (pl. XI, *19*) is also flat and thin in comparison to the upper level petaloids. The edge is slightly oblique, the poll straight.

CELTS WITH PARALLEL SIDES. These are rare.[85] The lower level produced one, the upper level three. Only one was complete (pl. XI, *20*). One broken upper level specimen measures 6 cm. across; it probably approximated large celts in length as well. The rest, including the lower level example (pl. XI, *21*), are small, from 1.5 cm. wide by 6 cm. long to 2.5 by 8 cm., the dimensions of the upper level specimen illustrated. Cross sections are all oval, with the exception of this specimen. Polls are rounded, when present; edges are convex. These small parallel sided celts may have been used as chisels.

**Notched Stones.** Two crudely notched flat pieces of extremely soft soap stone (pl. XI, *22*) were found in the Los Tamarindos humus. Similar specimens have been found at the eastern end of the lake, but never illustrated. The illustrated specimen measures 20 cm. in length but is only 2 cm. thick at the center. It shows no signs of heavy use, although one end has been straightened off. Possibly a stone of this sort was used as a net sinker; but it is evident that it could not have been used as a hammer or axe.

**Hammer Stones.** Three hammer stones were found in the humus, the same number in the lower levels. It is probable that old celts, after they had lost their edges, were also used as hammer stones, otherwise many of them would not have been shortened as much as they were. True hammer stones (pl. XI, *23*) are roughly circular, 8 to 10 cm. in diameter. They were made of the same sort of tough rocks as were large celts. One example is of andesite porphyry, another of a granitic rock. All show very evident marks of use; however, it is apparent that they were not shaped for their purpose but selected on account of their shape.[86]

**Grinding Slabs and Stones.** The true metate is lacking on La Cabrera and in the Valley of Aragua in general. Several slabs which have been taken from the excavation by Castillo had been worn on one side, as had the slab which covered Burial 33 (fig. 16, *13*, *14*). Wear was roughly oval, rather than evenly straight sided, either as a groove or extending to the edges of the slab. All such slabs are of irregular shape. The Burial 33 specimen measured approximately 50 by 35 cm. for length and breadth, 5 cm. in thickness.

Grinding stones, which cannot be called manos, since they are not uniformly worn in any way, are not common.[87] Only six were found at the site. One stone (pl. XI, *24*), a schist, has been worn on both sides so that the cross section is an elongated oval. Others were worn a little on one side, none on the other. One broken specimen was roughly triangular in section, but naturally so.

If the grinding slabs and hand stones described above formed part of a true metate-mano complex, one would expect to find a greater number of very much more worn specimens in collections from the valley. It seems obvious that food grinding on stone played a minor part in the lives of the Lake Valencia Indians.

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[84] Bennett (1937, pp. 124–127, fig. 16) found only one petaloid celt, termed "narrow butt celt," in the top of the mound, and 17 "small celts," similar to pl. XI, *14*.

[85] Bennett (1937, pp. 124–127, fig. 16) found 4 "rectangular" celts similar to those mentioned here from La Cabrera.

[86] Bennett (1937, pp. 124–127, fig. 16) found 6 "ball hammer-stones" similar to pl. XI, *23*, and *24* "muller-shaped hammer-stones."

[87] However, Bennett (1937, pp. 124–127, fig. 16) found 8 "flat manos" and 3 "long manos" which seem to be somewhat more regularly worn than the Los Tamarindos specimens.

**Shaft Straighteners or Smoothers.** The surface near the high, westernmost peak of La Cabrera Peninsula, just south of the Los Tamarindos Trench and in the vicinity of the West and La Ceiba Trenches (fig. 4), was littered with slabs of the schist which forms the local outcrops. Many of these had been roughly scored, as though to sharpen tools. Smaller slabs (pl. XI, *25*) are marked with smooth rounded grooves, as though they had been used for shaft smoothing or straightening, although they would probably not be very useful for the latter purpose, since the grooves are often as much as 40 to 60 cm. long and are shallow. The schist, however, does not make a good abrasive, so use must remain doubtful. These grooves occur on both sides of many long, thin slabs.

More probably a straightener is the much worn object from the upper half of the second meter (pl. XI, *26*), of a fine grained sandstone; since this stone is a much better abrasive than schist, the specimen may have been a combination straightener and smoother. The stone is roughly triangular in section; on one side there are crossing grooves; on the other two sides, one each, meeting to form one angle of the triangle. Only one of these can be seen in the photograph.

**Stones with Pointed Ends.** Three stones with roughly pointed ends (pl. XI, *27*) of quartzite gneiss were found, two in the Los Tamarindos humus, one from just below it. All can probably be ascribed to the later inhabitants of the site. They are very rough, worked only at the single pointed end, which was ground down circularly. Requena illustrates similar specimens [88] which he calls instruments for making fire, but there seems to be no evidence for this. Their use is problematical.

**Tablet.** Of unknown use is the nearly rectangular tablet of fine textured gneiss (pl XI, *28*). It measures 8.5 by 7.5 cm. in length and breadth, 1.5 cm. in thickness. The edges were carefully ground; surfaces and sides show no signs of use in industry. It has been suggested that this may have been a net gauge, which is possible but for which there is no real evidence.

**Triangular Stones.** In the bottom of the urn between Burials 2 and 3 of La Ceiba Trench (fig. 15, *lower*) two identically worked pieces of quartzite were found. The only differences are in color and size. One is white and slightly larger (pl. XI, 7), measuring 4.7 cm. in length. The other is of variegated color, pinkish brown and white, and measures 3 mm. shorter.

Each stone has been carefully and smoothly worked to form a triangle with truncated apices. The sides are slightly concave. Each apex shows a neat facet, from which the sides swell out, so that the greatest thickness of each specimen measures 2.1 cm. Minimum thickness in each case occurs at the end where the angle is smallest; here, just before the apex facet begins, the white specimen measures .9 cm. in thickness, the dark 1.1 cm.

These curious stones were either used for pot polishing or some similar purpose, or were ceremonial. With them were found two pottery discs, of the sort also found in Burial 36 in association with quartzite pebbles. If it were not for the peculiar and identical shapes of the two pieces under consideration, their use as polishing stones would be easier to postulate.

**Polishing Stones (?).** Besides the twenty-seven quartzite pebbles found in Burial 16, four were found in the Los Tamarindos humus and one in Burial 52. They are white or varicolored, brown, pinkish or blue-gray. About half appear to have seen use as polishing stones: the rest show no definite signs of use. Most of them are oval, some slightly irregular. Size varies from 2 to 5 cm. in length. Marked wear facets are lacking in all cases. None show working comparable to that which must have been done to produce the two triangular stones just described. Two or three were almost certainly used as polishers, including the specimen found in Burial 52, but the others cannot definitely be said to have been so used. None were found in the lower levels.

**Pendants.** The pendants shown in pl. XI, *29–33* are all that were found with two very fragmentary exceptions. They are all different.

Pl. XI, *29* shows a quadrilateral piece of impure quartzite 12 cm. in length, one side of which is rounded, the other straight, 8 cm. thick. Two grooves at the narrow end provide attachment. This piece was found with Burial 40.

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[88] Requena, 1932, p. 153.

Pl. XI, *30* is actually a broad-winged ornament, not dissimilar to types from the Andean region. Requena [89] and Bennett [90] illustrate somewhat similar specimens, including some (those with a central triangular element) which are possibly trade pieces from the Andes. The Los Tamarindos specimen is from the lower level. It is made of an impure limestone, measures 10.2 cm. in length, 2.8 in width, across the drilled hole, and .5 cm. in average thickness. The edges were neatly smoothed off, the hole drilled from both sides.

Pl. XI, *31* shows a broken pendant of thin micaceous schist, also from the lower level at Los Tamarindos. It was probably of semi-lunate form with a single hole for suspension. The two even more fragmentary pendants, one of them from Burial 39, are of the same material.

Pl. XI, *32* shows the only stone pendant from the humus, found in Burial 22. It is a simple, oval, thin (2 mm.) one made of micaceous schist.

A small, smoothed pierced piece of slaty rock (pl. XI, *33*) may or may not have been used as a pendant. This also is a lower level specimen.

**Beads.** Stone beads were made in three forms, cylindrical, discoidal and effigy. All are relatively rare, in comparison to the hundreds of shell beads.[91]

Cylindrical beads were made chiefly of pink quartzite (pl. XI, *34–36*). Seven were found on La Cabrera, only one below the humus. As a rule these pink quartzite beads are found in association with numerous shell beads. They are either straight or slightly rounded on the sides, length varying from .8 to 2.5 cm.

Aside from quartzite beads, only three other cylindrical specimens were found. The largest one (pl. XI, *37*), 3 cm. long, is of serpentine; the smallest (pl. XI, *38*) is of a fine textured dark limestone. The third specimen is of the same material, of poorer quality. Not all cylindrical beads show that they were drilled from both ends, but this was the usual method. In a few cases the perforation is perfectly straight and of even gauge, pointing to the fact that it was drilled from one end only, or rebored.

Discoidal beads are even less common; eight in all were found in the humus. The large white quartzite specimen (pl. XI, *39*) is unique. All the remaining specimens are of the small, flat type. They are of serpentine (pl. XI, *40*) and limestone (pl. XI, *41*, *42*).

Effigy beads are also rare; seven identically carved bird effigies (pl. XI, *43*), graded in size, were found in Burial 22, in association with shell beads and pendants. They are made of sericite, greenish in color. Each represents a crested bird; drilled holes for suspension were made from each side in the usual manner.[92]

**Button-like Objects.** Three button-like objects were found; two (pl. XI, *3*, *4*) of fine grained limestone, in the urn of West Trench Burial 2; the other (pl. XI, *5*) of serpentine, in the Los Tamarindos fourth meter. The two West Trench specimens are small (1.3 cm. in diameter), with flat bottoms, convex tops. They were drilled from the flat bottomed side with two convergent holes meeting below the upper surface. Similar "buttons" have been found at the eastern end of the lake.[93] They were probably used as ornaments rather than true buttons. The lower level specimen is not drilled; otherwise it is similar to the others, with a flat and a convex side.

**Worked Stone Wastage.** The Los Tamarindos lower levels produced eight pieces of sericite rock (pl. XII, *1*), wastage from stone work. They show many smoothly cut planes as well as grooves. Straight surfaces must have been cut by a string and sand sawing method.

**Unworked Stones.** A number of unworked stones of particular color or shape were found in the Los Tamarindos cut. These were white quartzite pebbles or pieces of rock crystal (pl. XII, *3*). A white quartzite pebble (pl. XII, *2*) was found in the bowl closing the mouth of the urn of West Trench Burial 4 (fig. 16, 7). Quartzite pebbles and crystals seem to have been the only important unworked stone at this site.

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[89] Requena, 1932, p. 157.

[90] Bennett, 1937, fig. 17. Of five specimens, one illustrated is almost identical to pl. XI, *30*.

[91] Bennett (1937, p. 127, fig. 17) found a very few cylindrical and discoidal stone beads.

[92] Bennett (1937, p. 127, fig. 17) found a single somewhat similar "bird amulet."

[93] Marcano, 1889, pl. 3, fig. 16.

## *BONE*

La Cabrera excavations, including unrecorded pits made during the stay of Berry and myself, produced some hundred and fifty mammal, reptile and bird bones, antlers and teeth, of which all but eighteen were unmodified. Several unmodified specimens were found in burials. Fish bones, all unidentifiable, were very common. The number of bone objects is small in comparison to those of shell, and the refuse material seems sparse. However, many bones were probably broken up, decomposing on the surface, while others were undoubtedly thrown into the lake, especially in early times. Many of these were found in lacustrine deposits, however.

**Unmodified Refuse Bones.** Mammal bones were identified by Dr. Gerrit Smith Miller, Jr., of the United States National Museum,[94] and include the following:

Domestic cattle (*Bos taurus*)
Horse (*Equus caballus*)
Jaguar (*Felis onca*)
Spectacled Bear (*Tremarctos ornatus*)
Crabeating Fox (*Cerdocyon thous*)
Tapir (*Tapirus terrestris*)
Peccary (*Tayassu torvum*)
White-tail Deer (*Odocoileus gymnotis*)
Swamp Deer (*Blastocerus* sp.)
Brocket (*Mazama* sp.)
Cricetine Rodents.
Rice Rat (*Oryzomys* sp.)
Capybara (*Hydrochoerus hydrochoerus*)

The domestic dog (*Canis familiaris*) was represented by many bones in both humus and lucustrine deposits.

Reptiles listed by Berry[95] include:

Alligator (*Caiman sclerops*); Berry gives the obsolete *Jacare sclerops.*

Crocodile (*Crocodylus acutus*); Berry gives the obsolete *Crocodilus americanus.*

Turtles (*Kinosternon* sp.); (*Podocnemis* sp.); (*Geomyda* ? ; Berry gives the long obsolete *Nicoria*).

Tortoise (*Testudo tabulata*)

Lizards of unidentifiable genera

There is no evident significant difference between native mammalian and reptilian fauna of the humus and lower levels. The few horse and cow bones, found only in the uppermost humus (stratum 1), were definitely not in association with urn burials, and post date, in my opinion, any aboriginal occupations of the site.

Bird remains were identified by Dr. Alexander Wetmore, of the United States National Museum; he reports[96] the following species:

Brazilian Cormorant (*Phalacrocorax olivaceus*)
Horned Screamer (*Anhima cornuta*)
Pied-billed Grebe (*Podilymbus podiceps*)
Cocoi Heron (*Ardea cocoi*)
Egret (*Casmerodius albus*)
Wood Ibis (*Mycteria americana*)
Graybreasted Tree Duck (*Dendrocynga autumnalis discolor*)
Fulvous Tree Duck (*Dendrocynga bicolor*)
White-Faced Tree Duck (*Dendrocynga viduata*)
Black-Collared Hawk (*Busarellus nigricollis*)
Red Winged Hawk (*Heterospixias meridionalis*)
Another hawk of the genus *Buteo*
Curassow (*Crax alberti*)
Purple Gallinule (*Ionornis martinicia*)
Gallinule (*Gallinula chloropus*)
Rusty Dove (*Leptotila verreauxi*)
A large macaw (*Ara* sp.)
An Amazon parrot (*Amazona* sp.)
A small paroquet of uncertain genus
Cayenne Owl (*Rhinoptynx clamator*)

Wetmore states that these bones are not fossilized but are free from organic material, and that there is no question that they are several hundred years old. Some may be considerably older. They are all species that are to be expected from the locality, the majority of forms that frequent aquatic or marshy habitats. Most are from the lower levels, although some occur in both humus and lower levels.

**Unmodified Bones found in Burials.** Fish vertebrae were found in four urn burials (7, 15, 52,

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[94] Berry, 1939, pp. 566–568.
[95] Berry, 1939, pp. 566–568.
[96] Wetmore, 1935, p. 329.

62). Burial 9 contained three teeth of a small rodent, probably the agouti. In the urn of Burial 52 there was found an alligator tooth and a small piece of an antler. Burial 27 had antlers of two deer, lying next to the head on the left side (fig. 16, *2*).

**Modified Bone, Antler and Teeth.** The worked bone, only eighteen specimens,[97] was kindly identified by the late Dr. Glover M. Allen, of the Museum of Comparative Zoölogy, Harvard University. It consisted of implements, ornaments and problematical objects. No traces of elaborately carved flutes,[98] of the type found by Requena's men at the eastern end of the lake, were found.

**Implements.** There are only two definite implements. One is a chisel (pl. XII, *4*), made from the ulna of a deer; only the cutting edge has been modified. This was found in Burial 58. The other is of antler (pl. XII, *5*); the point has been broken off; the thick end is grooved circularly. This could have been used as a punch, incising tool or marlin-spike. It was found in the Los Tamarindos East Side Lower Level.

**Ornaments.** This group consists of beads and perforated specimens which could have had no other use but ornament.

Six beads were all found in the lower levels, two in Burial 42 in association with shell beads. The others were not with burials. Pl. XII, *6* shows a plain specimen; pl. XII, 7, three carved specimens with circular grooves.

Pl. XII, *9*, shows a jaguar canine tooth, drilled laterally for suspension at the top, antero-posteriorly below this. This tooth was originally nearly twice as long as it is now, having been broken.

**Problematical Objects.** The eight objects which make up this group are puzzling as to their respective uses.

Pl. XII, *10*, may have been a simple flute-like instrument; there are no means of telling how many holes were drilled in it. It is probably a piece from the radius of a deer and was found in the Los Tamarindos humus. The larger piece of bone (pl. XII, *11*) from the metapodial of a deer is also tubular, but has no drill-holes. This was found in the fourth meter.

Spatulate objects (pl. XII, *12*, *13*) were in Burial 26 and in the urn between La Ceiba Trench Burials 2 and 3 (fig. 15, *lower*), respectively. The larger specimen is broken. The smaller one is neatly cut out in rectangular shape and measures only 1 mm. in thickness.

Five short spikes of worked bone were found, all but one (pl. XII, *14*) in the lower levels. This specimen appears to have been slightly thinned at one end, sharpened at the other, possibly for use as a projectile point. The other specimens (pl. XII, *15*) are longer. They were apparently sharpened at one end only. It is certain that they were not used as drills or awls; they could have been employed as toggle fish-hooks, but there is no proof of this.

Pl. XII, *16* shows a broken peccary tooth, the root of which has been ground flat and smooth on one side; it was never perforated. It was found in Burial 26 and was probably ornamental, possibly unfinished.

## *SHELL*

Shell objects were found in considerable numbers on La Cabrera, as they have been at other valley sites.[99] William J. Clench, of the Museum of Comparative Zoölogy of Harvard University, has kindly identified the following species, all of which are recent West Indian forms:

Marine Shells:
- *Strombus gigas*
- *Narita vesicula*
- *Cypraea exanthema*
- *Oliva reticularis* Lamarck
- *Cassis* sp.
- *Diodora alternata*
- *Fissurella nodosa* (Born)
- *Conus* sp.
- *Voluta musica*
- *Columbella* sp.
- *Margaritifera radiata* Leach
- *Pitar dione* Linne

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[97] Bennett (1937, p. 124) found only a single bone point, a chisel and a few beads.

[98] Requena, 1932, pp. 149, 151.

[99] Bennett (1937, pp. 120–124, fig. 15) found a quantity of shell artifacts at La Mata, including many of the types described here.

Marine Shells (*Cont.*):
- *Pitar albida* Gmellin
- *Tivela mactroides* (Born)
- *Spondylus echinatus* Martyn
- *Isognoma alata* Gmellin
- *Venus* (Chiome) *granulata* Gmellin

Freshwater Shells:
- *Ampullaria urceus*
- *Ampullaria sp.*

Land Shells:
- *Labyrinthus plicatus*

The beaches of the lake are covered with *Planorbis* shells, but these were either too small for use as ornaments or have disintegrated.

**Unworked Shell.** Only one unworked bivalve (*Venus granulata*) was found, in the urn of Burial 62. In Burial 26 a couple of specimens of *Fissurella* (pl. XII, *21*), and several of *Diodora* (pl. XII, *22*) were found. Many of the latter were also found in the Los Tamarindos humus, one in Burial 22. These shells do not need to be drilled, since they are characterized by a natural opening at the top.

One *Ampullaria*, of uncertain species, was found in the humus over Burial 16. It had probably not been intended to go with the burial.

**Broken Shell, Prepared for Working.** In Burial 26 (fig. 16, *1*) a small jar completely full of broken pieces of shell, most of them apparently *Strombus* or *Cassis*, was found. Six scattered pieces also occurred in the same burial. In all there are two hundred and three pieces. None show any signs of work, with the exception of a single pendant, described below. They vary from small pieces of thumbnail size to larger sections as much as 6 cm. in length. All parts of the shell are represented.

**Pendants.** A variety of forms come under the heading of pendants, since the term bead has been limited to those smaller specimens which occur in large numbers and were apparently strung together.

There are three major types of pendants: pierced whole shells, "tinklers" or reduced shells, and variable cut-shell forms.

The pierced whole shell type consists chiefly of bivalve shells drilled once for suspension. These were made of *Pitar*, both *albido* and *dione*, *Tivela* and *Spondylus*.

Seven specimens of *Pitar* or *Tivela* were found in Burial 62, two in Burial 10, several in the humus (pl. XII, *23–25*).

*Spondylus*, with the spines rubbed off the outer red surface (pl. XII, *26*), was found in the urn between Burials 2 and 3 of the La Ceiba Trench.

The single example of *Narita* (pl. XII, *27*), pierced for suspension, occurred in the Los Tamarindos humus.

Three pierced specimens of *Labyrinthus*, a land snail (pl. XII, *28*), were found in Burial 22, in association with a number of other shell objects and the stone birds described above.

"Tinkler" pendants of reduced shells were made of *Oliva* in fifteen out of eighteen cases. There is one specimen each of *Conus*, *Voluta* and *Cypraea*. The term "tinkler" has been taken from Pecos, New Mexico, specimens,[100] many of which are of *Oliva* and *Conus* which the Venezuelan specimens resemble almost identically. They were made by cutting off the spire of the shell, producing a nearly cone-shaped half-shell (pl. XII, *29–33*). *Conus* is most nearly a perfect cone (pl. XII, *31*). *Oliva* (pl. XII, *29*, *30*) is less pointed. *Voluta* (pl. XII, *32*) has flutings, and *Cypraea* (pl. XII, *33*) was cut off closer to the bottom. The walls were pierced by one of two methods, about equally common. Some were sawed through (pl. XII, *30–32*), others drilled straight through to the apertures (pl. XII, *29*, *33*). The latter method was apparently more common for *Oliva*.

Whether these objects were used specifically for noise makers, in Pueblo fashion, is not certain. Usually they were found singly, never more than three in a burial, sometimes in association with other beads. Burial 20 had three, Burial 62, La Ceiba Trench Burials 2 and 4 and Burial 40 (*Cypraea*) produced one each. Ten were found in the humus, including *Conus* and *Voluta*, one in the second meter gravel of the Los Tamarindos Trench.

Cut-shell pendants vary considerably in form. They were made of heavy shell, as a rule, probably chiefly *Strombus* and *Cassis*. Some are of *Spondylus*, others of *Margaritifera*, and other unidentifiable bivalves.

The simplest type is represented by only a single complete specimen (pl. XII, *34*), found in Burial 34, in association with a few shell beads and fragments of a similar pendant. Part of another flat pendant, apparently without incision, came from the third meter. The illustrated specimen, cut from a large shell and perforated once, has incision on each of the four corners, which were also slightly notched at top and bottom on each side.

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[100] Kidder, 1932, p. 190.

Similarly cut from a heavy shell is a round pendant (pl. XII, *35*, shows this *in situ*), found in Burial 26. The natural spiral structure of the shell was utilized in the removal of the off-center perforation, the edges of which follow structural lines in the shell excepting at the top, close to the border of the pendant.

Pl. XII, *36* shows a small triangular pendant, from the Los Tamarindos humus. It has two perforations and has had the upper corners broken off. It is really a miniature broad-winged ornament, similar to Andean types[101] (fig. 61, *1*, p. 135).

A more numerous group of pendants with more definite local distribution may be called effigy pendants. Although the four found on La Cabrera were all in Burial 22, they have been found in other valley sites,[102] in stone as well as shell. Usually they appear to be conventional representations of frogs (pl. XII, *37*, *38*). The illustrated examples are of *Spondylus*, the red side up; incision does not show well, due to wear. Two perforations are usual.

Turtles are less common. I know of no others from the area. The large one (pl. XII, *39*) is very realistic, carved out of a thick piece of shell, probably *Strombus*. The perforations behind each front leg are oblique, merging much closer together on the upper side. In spite of the natural concavity of the under side, the maximum thickness of the turtle, at the middle of the back, is 9 mm. The smaller specimen, of *Spondylus*, with the red side up, has suffered badly from decay; it hardly shows its incised markings and has lost one leg.

Thin, elongated pendants are rare from La Cabrera. The urn found between Burials 2 and 3 of the La Ceiba Trench produced five badly broken, rectangular, singly perforated specimens, of *Margaritifera* (pl. XII, *41*); this is a sort of mother-of-pearl.

Requena's collection contains a number of elongated pendants or beads cut into various forms, some apparently human, some fish or indeterminate figures. These were found in such numbers that whole strings were suggested.[103] The only comparable specimen from La Cabrera is an elongated incised piece (pl. XII, *42*), possibly representing a conventionalized human figure. It is laterally pierced at the thicker end. This was found with the unworked broken pieces of the jar of Burial 26, the only worked piece among them.

**Beads.** A number of cylindrical, round and flat discoidal beads were found in burials. A dozen unassociated specimens were found in the humus and lower levels.

The simplest type is the pierced, whole shell. These were found only with Burial 43, a third meter child burial. There were seventeen pierced specimens of *Donax* (pl. XII, *43*), a small bivalve, and two hundred and thirty-eight of *Columbella* (pl. XII, *44*), a tiny univalve. These had been prepared for suspension by the removal of the tip of the spire.

Discoidal beads are the commonest, found in many burials in varying numbers, from both upper and lower levels. Size varies from about 5 mm. in diameter by less than 1 mm. in thickness (pl. XII, *45*) to larger specimens (pl. XII, *46*). Less common are the largest (pl. XII, *47*, *48*) measuring nearly 2 cm. in diameter by 8 mm. in thickness. All the variations occur between these extremes. It is obvious that these round, flat beads were sometimes made in graded sizes, sometimes in uniform sizes. Some may have been abraded to conform to size after stringing. The rounded edge (pl. XII, *48*) is less common than straight-ground edges.

Cylindrical beads are also common. Usually both cylindrical and discoidal types are found in association. Most beads were probably parts of necklaces, since so many were found in the cervical regions of skeletons.

Heavier cylindrical beads were made by boring from each end of a prepared piece of shell, rounded and smoothed. An unfinished specimen, bored from one end only, was found in the third meter. These heavy specimens of medium size vary in length from about 1.2 to 3.5 cm., in diameter from .5 to 1 cm. (pl. XII,

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[101] See Bennett, 1937, fig. 15, for a similar, larger pendant from La Mata.

[102] Marcano, 1889, pl. 4, fig. 21; Von den Steinen, 1904, fig. 27; Requena, 1932, p. 141; Bennett, 1937, fig. 17.

[103] Requena, 1932, p. 139; Bennett, 1937, fig. 15.

*49*); this is the most usual type. The beads found with Burial 50 (fig. 16, *12*) are very large, made from the columellae of large shells, probably *Strombus* or *Cassis*. There were two large discoidal beads under the neck; the cylindrical specimens were graded in size from 1.5 cm. to 3.5 cm. in length, 1 to 2.5 in diameter; the largest is shown in pl. XII, *50*. The natural spiral of the columella can be seen.

Another less common type of cylindrical bead, made from columellae of smaller shells, did not require drilling (pl. XII, *51*). They are very thin walled, so delicate that few remain in good condition. A number were found in Burial 29.

**Button-like Objects.** Six thin rectangular pieces of shell, 1.8 by .6 cm. in length and breadth, drilled at each end (pl. XII, *52*) were found with Burial 29. Apparently they had formed a part of the necklace largely composed of thin undrilled columella beads.

Pl. XII, *53* illustrates one of the five similar, though less elongated, objects, given to us by a local man in 1934, said to have been found in an urn on the peninsula. The upper side is markedly concave except at the sides. This undoubtedly fulfilled some decorative purpose.

**Miscellaneous Objects.** Burial 58 produced a large shell of *Cassis*, drilled as though for suspension (pl. XII, *17*). Since the shell has a length of 13.5 cm. and considerable weight, it can hardly be called a pendant. It is not pierced for use as a trumpet.

The same man who presented us with the button-like objects also gave us several other shell pieces, said to have come from the same urn. Pl. XII, *18* shows an *Ampullaria* shell, drilled twice through the wall, once near the lip. Speculation is useless in regard to use.

Pl. XII, *19* shows a shell ring, 3.6 cm. in maximum diameter, carved with a low flange. Still from the same man and the same urn came two identical objects, one of which is shown in pl. XII, *20*. They are neatly and very smoothly carved from heavy shell and are flat on the bottom. The four grooves suggest attachment by means of threads to a garment, but there is no other evidence for this.

## *WOOD*

The single wooden object found on La Cabrera is a bead or pendant (fig. 18). This was found with Burial 43, in association with a large number of shell beads, *Columbella*, *Donax*, and small discoidal beads. It is dark brown in color and was in very soft, spongey condition on removal from the grave.

Dr. P. A. Vestal, of the Botanical Museum, Harvard University, very kindly identified the specimen as wood, but no more specific identification could be made without sectioning. It is his opinion that the piece had been covered with some resinous substance, or that it was originally cut from a piece of wood taken from an asphalt deposit. The nearest deposits of this nature of which I am aware are in Trinidad and eastern Venezuela.

The specimen itself measures 2.4 cm. in length, has a smoothly finished flat back and concave carved front; maximum thickness, 1.3 cm. The carved front surface (fig. 18, p. 57) has two elevations; carving is in simple lines and does not appear to represent any human or animal head or figure. The carved incisions were once filled with red paint, only a few traces of which are now discernable. It was drilled through laterally, somewhat off center towards the thinner end (fig. 18); this perforation was then connected with the smooth back by a second drilling, at right angles to the first. A small drill hole was begun, but left unfinished, just above the lateral hole on one side.

This single wooden object provides, of course, no indication of the extent of use of wood in the area. It is highly probable that wood played a most important part in the economy of both the early and later inhabitants of the whole region. The lack of projectile points of stone and bone suggests, for instance, that wood was used for this purpose as well as for many others, both utilitarian and decorative.

## *MAT-IMPRESSION*

The single impression of a mat (pl. V, *2*) occurs on a sherd from a La Cabrera Plain type platter or griddle. The surface bearing the imprint is flat, indicating that the impression is that of a mat rather than of a basket. The imprint itself is that of a piece of simple "checker-board" weaving. There are four separate strands visible, all approximately 3 cm. in width and marked by low ridges. Each strand was probably a single strip of palm leaf, which would account for the ridging. Close examination of a plasticene positive impression taken from the sherd does not suggest close-set groups of reeds or thin leaf-strips.

This single piece of evidence proves that many perishable objects were made by a people whose cultural remains consist almost entirely of pottery, stone, bone and shell. Naturally it does not imply that weaving techniques were unknown in later times. It is merely a reminder that archaeological work in most places produces only a fraction of the total of past material culture alone. The relative importance of perishable elements must remain speculative.

## STRATIGRAPHIC CONCLUSIONS

The geological differences in the Los Tamarindos Trench between lower, lake deposited and upper humus levels are no more marked than the cultural differences of which they reflect the relative chronology. The major elements both of geology and of cultural remains have been described. Here the correlation between them is systematized.

It will be recalled that below the humus, with the exception of a number of recognizable intrusions from the humus, burial methods, pottery, and to some extent other objects, differed radically from the overlying material. The summary of traits, given below in correlation with geological position, is a brief definition of two cultural "phases." The term has been applied to various cultural sub-divisions and is used here in the sense which Gladwin [104] has given it, although I have not attempted a general cultural classification based on his system. A phase is in no sense a "basic culture"; it is simply a "phase of culture," defined to include as many traits as can possibly be recovered archaeologically for a given period — a convenient method of designating the varied units of wide-spread "basic cultures." The advantages of its use lie in the fact that each phase, as defined, is given a local geographical name, thus avoiding the necessity of naming a "culture" and subdividing into "Early," "Middle" and "Late" or numbering the successive periods. Furthermore, after a phase has been defined, its geographical distribution may be traced and recorded less clumsily than would be the case were the particular period given a number. Another obvious advantage is flexibility: intervening phases can be fitted into sequences without renaming or renumbering a sequence thought to have been complete.

There are two such phases of culture represented on La Cabrera. The earlier has been called the "La Cabrera Phase," since it has been isolated only on La Cabrera Peninsula, the later, the "Valencia Phase," since it is better known in the lake basin. On La Cabrera Peninsula they are composed as follows:

| | La Cabrera Phase | Valencia Phase |
|---|---|---|
| Geological Position | Confined, at present, to the lower lake deposited gravels underlying the humus of the Los Tamarindos Trench, on the Peninsula of La Cabrera. | Humus of all La Cabrera trenches; some sub-humus intrusion of burial in the Los Tamarindos Trench.<br>Humus and some underlying deposits in other sites in the Valley of Aragua. |
| Burials | Exclusively primary. Two burials with covered head or whole.<br>Burials in lake beaches or close to the shore in lake deposits. | 70% secondary urn, 12.9% primary, two with covered heads.<br>One primary urn burial. One cremation.<br>Burials in humus or slightly intruded into sub-humus gravels. |
| Mortuary Offerings | Chiefly beads.<br>Pottery rare. | Often abundant pottery.<br>Beads and other objects.<br>Some food offerings. |
| Skull Deformation | Some, probably not common. | Probably in more cases than in La Cabrera Phase. |
| Pottery | La Cabrera Plain type.<br>La Cabrera Polished Gray subtype. | Valencia Red type. (One type of one ware). |

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[104] Gladwin, W. and H. S., 1934, p. 10.

| | La Cabrera Phase | Valencia Phase |
|---|---|---|
| Pottery (*Cont.*) | La Cabrera Red type.<br>(Two wares, one type, and one subtype of Plain ware, one type of Red ware.) | |
| Stone | Many large polished celts; flaring side and oblique poll types probably confined to this phase.<br>Larger stone pendants all from this phase.<br>Beads rare. | Few large polished celts, all probably of simple non-parallel sided type.<br>Many small non-parallel sided and petaloid celts.<br>Many smooth pebbles or polishing stones.<br>Pointed end stones.<br>Beads relatively common, some carved. |
| Bone | Beads.<br>Bone "spikes." | Varied bone work, including "spikes." Lack of beads probably not significant. |
| Shell | Beads, cylindrical, discoidal and whole shell.<br>Pendants rare. | Beads, cylindrical and discoidal.<br>Cut-shell pendants and carved beads. |
| Wood | One bead or pendant. | No specimens. |
| Matting | One impression of "checker-board" weave. | No specimens. |

The above bare summary expresses the differences between the two phases. There are, of course, unique specimens found in connection with either phase which cannot be used in differentiating them; for example, the wooden bead, and mat-impression do not prove anything but the use of wood and mats in the La Cabrera Phase. Although there is little doubt that they were used in the Valencia Phase as well, they cannot be listed as component traits.

Aside from burial, the major difference between the two phases lies in ceramics. This is striking. Although a few sherds of La Cabrera Plain and Polished Gray ware were found in the humus, no Valencia Red ware was found below the second meter and relatively very little therein.

The differences in the pottery types themselves are apparent. In summary, there are significant differences to be found in paste, surface finish, vessel shape, component elements of shape, miscellaneous objects and decoration. These may be listed as follows:

| | La Cabrera Phase | Valencia Phase |
|---|---|---|
| Paste | Sherd and mineral temper. Some clays, especially of Polished Gray ware, are characterized by many organic inclusions. Chiefly coarse, some fine textured paste (Polished Gray ware). | Sherd and mineral temper. Coarse texture. Clays are not identical to those of La Cabrera Phase wares but do not differ radically. Miss Shepard reports that different clay beds were probably used by the later inhabitants. |
| Surface Finish | La Cabrera Plain—lacks slip, hastily smoothed.<br>La Cabrera Polished Gray, unslipped, well compacted, fine texture.<br>La Cabrera Red, simple red slip, often well polished. | Valencia Red, poor quality micaceous slip which sometimes does not become red over the entire vessel. Seldom well finished on large vessels but may be well polished, rarely. |
| Shapes | La Cabrera Plain, chiefly large jars with high, straight, or lower, everted rims. Double-spouted jars relatively common. Bowls very rare. Griddles rare.<br>La Cabrera Polished Gray, deep bowls with distinctive incurved rims. Thin platters. Spouted jars rare.<br>La Cabrera Red, chiefly bowls, with distinctive incurved rims, high straight sides and rims rising from low angled walls, and outcurved, flat topped types distinctive, but rare. | Valencia Red, a variety of shapes, most of which are characterized by a homogeneity expressed by flat bases with walls rising in similar flare throughout the range of large burial urns, small outcurved rim jars, *pimpinas*, bulging neck jars, narrow mouth jars, bowl-urns, low open bowls, and bowls with everted rims.[105] Double-spouted jars very rare. Griddles relatively common. |

[105] Hollow rims were absent at Los Tamarindos but did occur at La Mata (Bennett, 1937, p. 94).

| | La Cabrera Phase | Valencia Phase |
|---|---|---|
| Bases and Supports | La Cabrera Plain, flat, but rounded off as wall rises. Very low annular base, one example. Low leg-ring bases. Low tetrapod. Evidence for higher legged vessels, uncertain whether tripod or tetrapod.<br>La Cabrera Polished Gray, round bottomed bowl. Evidence for large number of low leg-ring bases, probably the usual type.<br>La Cabrera Red, little evidence in connection with shape. Flat base like those of La Cabrera Plain. Rounded bowl-bases; little evidence for bases. | Valencia Red, nearly all bases flat, with sides making sharp angle with base. Some rounded bases, both for large urns, small jars and bowls. Annular bases rare, some of "lattice" type.<br>Tripods virtually absent. |
| Handles (omitting spouted jar handles) | La Cabrera Plain, horizontally placed, small handles, usually with upraised projection, relatively common. Vertical handles very rare.<br>La Cabrera Polished Gray, absent.<br>La Cabrera Red, one small vertical handle. | Valencia Red, simple handles very rare. A few small vertical handles, from rim to shoulder. Adorno handles, relatively common. |
| Figurines | Absent. | Common, all female or sexless, latter not common. Animal, varied forms. |
| Pipes | Confined to La Cabrera Polished Gray ware, of which they make up about half of the remains. | Absent. |
| Ear-Plugs | Confined to La Cabrera Plain and Polished Gray. | Absent. Some indication of their use on figurines (?). |
| Spindle Whorls | No definite specimens, but probably one of La Cabrera Plain ware. Drilled sherds possibly used as whorls. | Absent; only one drilled sherd. |
| Decoration — General | La Cabrera Plain, modeling, incision and punctation. High relief adornos present, but rare, distinctly different from Valencia Red adornos.<br>La Cabrera Polished Gray, little decoration in modeling and incising on vessels. Pipes elaborately modeled in distinctive style. Some red paint in incisions.<br>La Cabrera Red, some simple incision, some modeling. Incision on tops of broad rims, distinctive. | Valencia Red, white paint very rare. Profusion of modeled decoration in high and low relief, often combined with incision. Effigy vessels, distinctive. Adorno styles and general use of punctate appliqué are distinctive. |
| Treatment of Eyes. (In modeling.) | Coffee bean and round pitted eyes are both used on La Cabrera Phase specimens; Round eyes are more common on animal representations but are sometimes used on human ones as well. | Coffee bean eyes always used on human representations[106] but also used on animal figurines. Round eyes often used on animal adornos. |
| Use of Color | Some filling of incised lines with red in La Cabrera unslipped ware. Some use of slip for bands in La Cabrera Red. Two painted sherds almost certainly trade pieces. | White paint in two cases on Valencia Red vessels. Slip occasionally used as a paint. |

The foregoing summary adds greatly to the sum of the differences between the two phases. As noted above, the La Cabrera Phase has never been isolated, although some of its elements, primarily pipes, have been known for some time to be characteristic of Lake Valencia culture. I was fortunate in finding a locality which produced so much earlier material, although full data are still lacking for the La Cabrera Phase. This is especially true of vessel shape as a whole. I do not believe that further excavations on La Cabrera would produce enough vessels to make the expense worth while, since the conditions are such that whole vessels are extremely rare. This is due to lack of mortuary pottery and to greater depth of occurrence. The location of another site, with pottery of the La Cabrera Phase types in better condition, would be of great interest.

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[106] This seems to be the case at Los Tamarindos, but elsewhere there are some figurines with round eyes which, like pl. VII, *30*, may represent either human beings or monkeys (Bennett, 1937, fig. 12).

Within this phase itself I have not been able to determine any chronological changes. This is probably due to deficiencies in method and should be checked, if possible, since it must have been present at La Cabrera for some time.

The Valencia Phase, on the other hand, is represented by a mass of material from many sites in the valley. San Mateo material (p. 86) represents the phase, as does most of the collection material from the Valley of Aragua in Venezuela, the United States and Europe.

Osgood's excavations have not been published.[107] Bennett's material all appears to be of Valencia Phase type, with the exception of a pipe fragment,[108] certain unslipped gray ware[109] and the plain "wishbone" handle,[110] which occurs chiefly in the lower half of his mound and chiefly in gray ware. It is notably absent on Valencia Red ware from Los Tamarindos but common in La Cabrera Plain ware. The much commoner occurrence at La Mata of failure of micaceous slip to become red, so rare at Los Tamarindos, and the common use of plain handles may represent a local difference between the two sites. Further differences are expressed in the absence of straight sided bowls (Type A3)[111] and hollow rim bowls (Type A4) in my collection.

The La Mata mound indicated certain interesting changes within the Valencia Phase. The most striking of these are probably reflected on La Cabrera Peninsula, although they cannot be checked stratigraphically.

There are four categories of material which Bennett found almost without exception in the top half of his mound: (1) wide rim adornos, (2) seated spread-legged figurines, (3) low neck jars, (4) hollow side-wall bulge adornos (Type F, ridged-bulge on body, hollow). Of these, wide rim adornos and "bat" adornos, which Bennett includes in his wide rim classification, seated spread-legged figurines and jars with narrow, low mouths (fig. 22) were found only in the burials and rubbish of the West and La Ceiba Trenches, none in the Los Tamarindos Trench. Since the bulk of my material came from the Los Tamarindos Trench, this correlation between the upper half of the La Mata mound and the West and La Ceiba Trenches probably indicates that these trenches represent a somewhat later period than the Los Tamarindos Trench. This is borne out by the fact that wide rim adornos and spread-legged figurines are very common in collections from the valley, and it does not seem possible that they should be absent in the Los Tamarindos Trench had they been in common use when that part of the site was occupied. The absence of *pimpinas* in the West and La Ceiba Trenches is probably not chronologically significant.

Aside from elements which Bennett has demonstrated to be late at La Mata, large burial urns with round bottoms occurred in the West Trench. Bennett found a number of these,[112] and they are common at other sites; they may be later than the flat bottomed type but more probably represent another local preference.

Further analysis of changes in the Valencia Phase will probably be most successful in mounds, with greater vertical accumulation than flat sites.

The problem of the nature of the change from one phase to another must remain in doubt for the present. There is no sterile stratum separating the two phases in the ground, and the break is, therefore, not as clear as it would be under such circumstances. In the second meter there are sherds of wares of both phases, as well as burials; no burials were found which had with them wares of both phases. Thus, there are no means of determining whether a new population took over the site, foisting major cultural changes on the original inhabitants, or whether these people were killed off or driven out; either could be true. There are certain features of burial, for instance, which may have been derived from the older. By this I mean primary burial, and especially primary burial with a vessel over the head. However, the vessel over the head is not common among the earlier burials.

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[107] Exhibits in the Peabody Museum of Yale University show some La Cabrera Phase sherds and a few pipe fragments from beneath the mound excavated, thus checking with the data gathered from Los Tamarindos.

[108] Bennett, 1937, p. 120.

[109] Bennett, 1937, p. 91.

[110] Bennett, 1937, p. 106.

[111] Bennett, 1937, p. 94, fig. 7.

[112] Bennett, 1937, p. 85.

Certain simple decorative elements, for example, incised zig-zags and chevrons, often combined with punctation (the latter not well represented in the Valencia Phase on La Cabrera), are shared by the two phases, but these are simple and widespread traits. At some places, La Mata for instance, the people may have retained old traits, such as handles, for longer than at La Cabrera. Further work is required to elucidate the whole problem.

I have not been able to determine anything definite concerning the age of the deposits themselves, nor do the cultural remains aid in this, except, I feel, to corroborate a lower estimate than one which reckons with thousands of years. There is little doubt that the whole culture represented by both phases is pre-Columbian; the earlier phase may have persisted for some hundreds of years, and the urn burials of the Valencia Phase probably do not greatly antedate the Conquest, although changes within the phase indicate that it may have persisted for some time.

# EXCAVATIONS AT SAN MATEO

THE town of San Mateo lies 23 kilometers east of Maracay, on the main highway from Caracas, and close to the left or north bank of the Rio Aragua, one of the principal affluents of Lake Valencia (fig. 1). The site is thus situated definitely in the Valley of Aragua, but considerably above the level of the lake at its highest. The Aragua is a small stream, normally 6 to 7 meters across, but may overflow its banks during the wet season. Today the region is still covered with deciduous forest, except where agriculture has been carried on, as it has been in most parts of the valley, but deforestation in the region of the head waters near La Victoria has greatly reduced the heavy growth of this type of tropical forest. There are no geographical features of particular importance archaeologically, excepting the fact that the river's periodic rise and former greater volume has left sand and silt deposits at some distance from its banks.

The archaeological site examined in 1934 is extensive; remains have been found in the town itself during the course of adobe brick manufacture and agriculture in the surrounding fields. San Mateo is simply another of the numerous sites which point to a large aboriginal population in the Aragua Valley.

Test excavations were made on both sides of the railroad track, just east of the station of San Mateo.

In general, the site produced very little, with no evidences of antiquity or occupation previous to that of the late inhabitants of the region, all the remains being referable to the Valencia Phase of culture, as described from the Los Tamarindos site. The trenches north of the railroad track were cut into a bank of undisturbed ground about 1.50 meters above the level of the cleared and excavated land bordering the track. Strata encountered here consisted of from 30 to 40 cm. of humus soil, underlain by fine river sand and silt; below 50 cm. no cultural material was found in the pits, dug to a depth of 1.50 meters from the surface. Nothing was found in any of the seven pits excepting sherds, stone and shell material, as well as other evidences of occupation in the form of charcoal and deer bones. This was a disappointment, since Jahn informed me that he had found a number of urn burials near the station some years ago and showed me some photographs illustrating secondary burials in large urns of the familiar Valencia Red type.

The humus of the north section of the site appeared to have been disturbed; in the upper 10 to 15 cm. besides aboriginal and probably colonial pot-sherds, there were found several beef bones, of recent origin, a musket ball and a one-pound iron shot, undoubtedly left there in the battle of San Mateo, fought in 1819 during the War of Independence. The pits in the south section showed little sign of disturbance, however; there the humus and underlying sand and silt were of the same consistency, except that the humus was thicker, averaging 50 cm. Most of the stone and shell material was found in these pits.

## *BURIALS*

The only burials found were located in the dirt street of the town, just outside the railroad fence. The urns were apparent in the street from the surface, since the thin humus had been worn off or removed, and it is probable that the urns were placed in the ground with their tops from 25 to 40 cm. from the surface, so that the bottom halves or two-thirds were sunk into the river sand. Their rims and shoulders were gone, ground down by feet and wheels, making it impossible to determine their original disposal. Only two of the four urns contained remains; whether the remaining two were buried empty, as was sometimes done at La Cabrera and at La Mata, or whether the bones had been removed at some subsequent time by the people of San Mateo, is impossible to say.

San Mateo secondary urn burials show no difference in the disposal of bones or the type of containing urn, from those of other sites. Two skulls from burials so near together and in ware of exactly the same style, one undeformed and the other strongly so, is an interesting corroboration of the conclusion in regard to this feature derived from the La Cabrera finds.

Burial 1. Fig. 16, *10*. Secondary urn burial of a young adult female.

Burial 2. Fig. 16, *11*. Secondary urn burial, adult male, frontally flattened skull.

## SAN MATEO SPECIMENS

San Mateo produced few specimens; the two burials had none within the urns. Everything that was found, with the exception of some coarse, heavy, brown pottery near the surface was referable to the Valencia Phase, probably late.

### *CERAMICS*

The coarse, brown ware, from large vessels of uncertain shape, is probably very recent, made in colonial or later times. This is evidenced by the mixture of the top soil, containing beef bones and musket balls.

Definitely Indian pottery is all of Valencia Red type. Flat bottomed burial urns, small jars with outcurved rims, one sherd with small handles comparable to those shown in fig. 23; pl. VI, *22*, bowl sherds, a few adornos, and heavy platter or griddle sherds composed the lot. No whole vessels of any kind were found at this site.

Of six adornos one is a simple incised rim projection, one a handle adorno, while four are fragments of large, typical wide rim adornos, of the type shown in pl. IX, *19*. This evidence of wide rim adornos points to the probability that San Mateo was a lately inhabited site.

### *STONE*

Stone work consisted of one stone disc of granitic rock, 13 cm. in diameter, with slightly convex faces, possibly a pot lid. Aside from this the only stone objects found were half a dozen fragmentary pendants of limestone, slaty rock and schist.

### *SHELL*

Shell work consisted of a single *Oliva* tinkler with grooved suspension hole, similar to the Los Tamarindos specimen illustrated in pl. XII, *30*.

# RECONNAISSANCE IN THE STATE OF LARA

## TOPOGRAPHY AND ENVIRONMENT

THE State of Lara (fig. 1), directly south of the State of Falcon, lies largely within the tropical zone, less than 800 meters above sea-level. This southern continuation of the dry, barren Falcon area is characterized by low hills, wide flats, little available water and xerophytic vegetation. This condition obtains over most of the State with the exception of the river valleys. The Tocuyo, rising on the eastern slope of the Paramo del Jabon, one of the heights which form the boundary between Lara and Trujillo, flows into the sea. The mountains extend into southwestern Lara, in the Humocaro area, on the upper Tocuyo, but the east-west chain is practically broken here to continue as the coast ranges east of Puerto Cabello, although a broken ridge of higher land extends across both Lara and Yaracuy to separate the Caribbean and *llano* drainages. The Rio Turbio, rising in the hills southwest of Barquisimeto, flows northeast to that city, where it turns southeast and eventually reaches the Cojedes, to form a part of the southern or *llano* river system. The Yaracuy, like the Tocuyo, drains into the Caribbean through the State of Yaracuy, but the watershed is not well defined, and there are obstacles to passage from one drainage to the other. South of Barquisimeto and Tocuyo, low ranges extend south and end in the plains; these hills receive more water than those to the north and are more favorable locations for habitation. Most of the population is now concentrated in the valleys of the Tocuyo and the Turbio, other smaller streams, or the hills on the northern border of the plains. The dry areas are extremely unfavorable; it seems unlikely that any large groups could have lived in the area between Barquisimeto and Carora or in the northern part of the State. Small groups can find water in many places, but populations such as must have surrounded Lake Valencia or Lake Maracaibo could not find subsistence here.

## ARCHAEOLOGICAL SITES

With Barquisimeto as a base, I endeavoured to locate sites in Lara for several weeks in 1934, meeting with little success. Many promising sites were mentioned locally, but examination and some excavation revealed very few traces of aboriginal occupation, in spite of the fact that there were undoubtedly a number of Indians in the region at the time of the Conquest. There is a local custom of searching for beads from archaeological sites, during Holy Week, to be worn for luck. The locations of these sites were known, but few of them produced anything except these very small circular shell beads. The following sites were visited and examined; they may be located on fig. 1.

### LA RUESGA

Some 5 kilometers north of Barquisimeto, just west of the line of the railroad from Barquisimeto to the coast (the Bolivar Railroad), on a low ridge, test pits were sunk on the advice of Brother Nectario María, of the Colegio La Salle. Some surface sherds were found, but these were apparently of recent manufacture. Digging about 1.50 meters to shale produced no signs of occupation; although this was a site that was supposed to have produced beads, and holes had been dug there for the purpose, none were found, so the site was abandoned.

### LAS VERITAS

This area, some 15 kilometers north of Barquisimeto, was reported as one producing the same small shell beads. Many of these were seen, worn by local women, but no burials or pottery were reported. The country north of Barquisimeto is very dry, the vegetation consisting of thorn bushes and cactus, but water may be impounded in ravines among the low hills during the rainy season.

## SANTA ROSA

The town of Santa Rosa, about 5 kilometers east of Barquisimeto, is directly on the boundary between the States of Lara and Yaracuy; the Rio Turbio has cut a broad valley here. On the west bank of the river, below the high bluff where the town is situated, a number of ravines lead to the river. On the lower course of one of these bead-searchers had dug a number of pits. Further digging produced a few of these specimens, but no pot-sherds, although a 1 meter trench was dug, reaching a shale stratum.

## CERRO MANZANO

Six kilometers south of Barquisimeto, on the road to Rio Claro, after crossing the Turbio and climbing the "mesa" on the south corresponding to that on which Barquisimeto is situated north of the river, Brother Nectario María excavated several burials in 1932 and 1933.[1] The site is next to the road, near a small tile factory. The surrounding country is very dry and deeply eroded. No traces of aboriginal occupation of the site were left, and such numbers of modern sherds covered the ground, from the tile factory, that surface indications were completely lacking. Brother Nectario's digging had apparently been done at the edge of the clay pits and had reached the road itself. He informed me that he had exhausted the site, which appeared to be true, since nothing was found.

## BUENA VISTA

The village of Buena Vista lies near the headwaters of the Turbio, about 25 kilometers southwest of Barquisimeto. The Turbio Valley here is green and fertile, but the surrounding low hills are covered with the usual cacti and thorny shrubs. Some few kilometers from the town, on the north side of the river, in the midst of the thick xerophytic growth on a low ridge between two of the innumerable *quebradas*, well back from the river, beads have been found. Excavation produced a few fragments of a skull, only a few centimeters from the surface, and several plain dark gray pot-sherds, probably aboriginal. No further signs of occupation were found, in spite of the trenching and questioning of the inhabitants, who had guided us to the site.

## CUEVA DE LA VIEJA

The Cueva de la Vieja is a large cavern, situated near the summit of a low conical hill, called La Vieja, located about 5 kilometers southeast of the town of Sarare, which lies on the Rio Sarare, among the low hills bordering the northern stretches of the *llanos*. This region is very much better watered than the area north and west of Barquisimeto and should produce archaeological material, given the necessary time for close search. The inhabitants of Sarare had heard of archaeological material from various sites, but no one seemed able to say exactly where these were located. The Cueva de la Vieja had been visited by Brother Nectario María, and a couple of painted sherds had been found. Feeling that there was a possibility of discovering a cache in the cavern, I spent some hours, in company with a number of men and boys, searching among the stalactites and stalagmites of the place, which was full of bats, dark and wet, obviously never used as a dwelling site. It is probable that it was used as a refuge or hiding place, since the entrance is a large crevice less than 1 meter wide and only a few meters long, with heavy growth surrounding it.

## ZUMBADOR

The *caserio* of Zumbador is located 10 kilometers north of Barquisimeto, west of the village of Cuji on the Bolivar Railroad. The site is at the foot of the north slope of the low, barren hills which rise between Barquisimeto and the wide flat plain west of Cuji. Nothing could appear less hospitable than the surrounding region, yet some water is available for the few inhabitants today, derived from the impounding of flood water in earth tanks. Maize is grown, but without irrigation. There is a large plantation of sisal nearby, which thrives in the dry climate.

The only surface indications at the site were holes that had been dug in the annual search for beads, several of which were found on the surface and in the holes by the crowd of children and adults who came out to watch the work. A few plain dark gray and buff potsherds were also present on the surface, but none were found in excavation. Top soil for 25 cm. overlying a hard yellow clay mixed with pebbles formed the strata. The latter was sterile; a trench 1.50 meters in depth produced one obviously aboriginal tripod vessel, with the legs broken off, in the top soil 15 cm. from the surface. There were no other evidences of occupation in the form of sherds or other refuse. The inhabitants had never found burials or other vessels, beads having been their only finds in the course of their fairly extensive diggings.

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[1] Nectario María, 1933.

It is my opinion that these Lara sites must have been camps occupied for very short periods and that no very numerous remains are to be found in the desert region. It is probable that larger sites do exist in the more favorable valley regions, but a great deal of careful search will be necessary to locate them. From the historical accounts it is clear that more remains must be hidden even in the dry areas. Possibly farther north some archaeological material might be encountered, but the search for sites in such country is a very difficult task, requiring much time, and their discovery usually is the result of chance or local information, which was neither keen nor reliable nearer Barquisimeto.

# EXCAVATIONS AT CARACHE, STATE OF TRUJILLO

## TOPOGRAPHY AND ENVIRONMENT

THE Distrito Carache (fig. 1), in the northeast corner of the State of Trujillo, borders on the State of Lara. The eastern boundary is formed by the divide separating the drainage of the Tocuyo River, on the Lara side, which reaches the sea, from that of the Motatan-Monay-Cenizo-Barua River system, flowing into Lake Maracaibo. The divide, a series of *paramos*, some reaching altitudes of over 3000 meters, runs nearly north and south here and represents the eastern extension of the true Andean chain, which dwindles to low hills in Lara and Yaracuy, only sufficient to preserve an irregular watershed between the *llano* and Caribbean drainages. In Trujillo the *llano* rivers rise on the southern slopes of the Andes; and south of the Distrito Carache, in the Bocono area, as the divide curves towards the north, the Bocono and its numerous tributaries flow southward to the plains.

The little town of Carache, capital of the district of the same name, is situated in the upper valley of the Carache River, which rises from numerous small streams and *quebradas*, converging westward from the divide which runs north and south. Two streams, the Quebrada Vistaru and the Quebrada Misnumboc, join just above the town to form the Carache; at the town the valley extends nearly north and south, but some 15 kilometers southwest of the town the stream turns sharply north, having passed around the southern end of the Loma Bonilla, the ridge forming the western side of the Carache Valley at the town and for some distance north and south of it. Having flowed due north for the same distance it has flowed south and west, the Carache turns nearly due west, to reach the Monay, flowing west across the Llanos de Monay, joins the Motatan to form the Cenizo, which becomes the Barua in its lower course, reaching Lake Maracaibo in the southern part of the eastern section of the State of Zulia. The Carache region is thus actually in the Maracaibo drainage system, but is very close to the Tocuyo drainage on the east, and the streams which enter it on its southern swing rise only a very few kilometers from the headwaters of the Bocono drainage on the south.

Carache is reached by a road which leaves the main Transandean Highway at La Cuchilla and crosses the Loma Bonilla, dropping into the Carache Valley after crossing this high ridge, rather than following the river around its southern end. The town has an altitude of 1208 meters above sea level, which puts it into the sub-tropical or temperate zone, but either on account of the distribution of rainfall or of deforestation, the sides of the valley are not wooded, but covered with almost the same xerophytic vegetation which characterizes the lower areas of Falcon and Lara. They are consequently deeply eroded. Many areas in Venezuela of comparable altitudes are luxuriantly covered with forest, often produced by the condensation of moisture at altitudes of over 1400 meters, but the Carache region is not quite high enough to obtain this condition, and the rainfall is probably not sufficient to produce such growth as it does on the coast range north of Lake Valencia at the same height. In the valley irrigation is practical, and there are large trees which were once undoubtedly very much more abundant than they are today, since the valley is intensively cultivated, now devoted chiefly to sugar cane and maize. The climate is delightful and altogether the valley is an ideal situation for an agricultural community.

## MIRINDAY SITE

The Mirinday site lies on the slope of the eastern side of the valley, across the river from Carache town. This rise is one of the foothills of the divide to the east and is called "Cerro de los Indios," from the quantities of remains which are found there and possibly from old accounts of its aboriginal occupants. It is exceedingly steep and reaches a height of some 250 meters above the valley floor. Remains are found on the lower half of its height, up and down the valley for a couple of hundred meters. They also occur down the valley, rather sparsely, to Los Chaos, the second site, but concentration seems to be greatest at these two places. The remains consist of pot-sherds, stone and bone artifacts and burials.

It is extremely difficult to trench at Carache, since the precipitous slope has been deeply eroded in many narrow, deep gullies, sometimes 10 meters deep at points some 20 to 30 meters above the valley floor, where most of the material seemed to be concentrated. The only flat spaces are now occupied by houses, where grading had been done, very probably, and digging in these places was not allowed. Furthermore, it appeared that erosion had scoured the surface to such an extent that, at the foot of the slope, it was never possible to be sure that material had not been washed into its present position. Trenching produced sherds of painted and plain red types, the latter in a majority of approximately six to one, close to the surface for the most part, but extending below to a depth of about a meter. In the gullies sherds were numerous and appeared to be projecting from the sides at great depths, but since none occurred in undisturbed ground below 1 meter, these must have been washed down. Burials had been washed out in many cases and were found projecting from the gully walls, with bones at the foot of the slope in the detritus washed from above. A considerable amount of charcoal occurred in the red adobe soil, mixed with stones, of which the slope consists, but no signs of hearths or house sites were apparent. This does not seem strange when it is remembered that the steepness of the slope is such that no houses would have been built except on the flat places now occupied by present-day dwellings, and that if house sites had been graded off and later abandoned, they would soon have become completely obliterated. The amount of sherd material is so great on the entire slope, however, that it seems quite obvious that a town of considerable size was once situated here; local informants all said that no remains were found on the western slopes, and only occasionally in the fields along the river. The valley floor and slopes might repay an intensive search.

## *BURIALS*

In the course of examining the site, burials were found to be more numerous on the slope at a height of 20 to 30 meters above the foot than lower down, where a trench produced none, but where odd bones suggested their having been washed out. Above, burials were seen in the banks of gullies, most of them partially washed away, but 6 were noted, all adult, which could be seen to have been fully articulated, primary direct burials. Many others were removed by the motley crowd of curious onlookers from the gully walls. These burials were close to the surface in many cases, from 50 cm. to 1 meter down, but how deeply they originally were placed it is impossible to say. It is probable that wash from above has compensated for soil washed from the surface directly over the burials, however, so that they were likely to have been buried at about these depths. They were distributed over the whole area of the site, in no order. Over most of the burials, there appeared to be a greater amount of loose charcoal in the ground than at other spots, but no ash. This may mean that small fires were built over the graves after they had been partly filled, or while the bodies were fresh. It is certain that none of the bones were burned, however.

A further factor in the disposal of the dead was the use of slabs to cover the bodies in some cases. We removed one burial, an adult, in flexed position on the left side, partly eroded out of the ground, covered by a large slab which showed obvious signs of wear on its under surface. This slab was flat, measuring 75 by 40 by 8 cm., roughly rectangular in shape. The burial under it was in a very bad state of preservation, due to the air space under the stone. Several of the burials removed by the crowd of onlookers from the gully walls had slabs over them, but these showed no signs of use.

Only one burial, found in the course of work, had escaped erosion; this was that of an adult female, with no slab over the body but with the usual rather thick, but not dense, accumulation of charcoal above it. It lay in a flexed position, on the right side, with the hands at the neck. The head was to the south, but particular orientation is no more a feature of Carache burials than it is of primary burials in the Lake Valencia area.

## LOS CHAOS SITE

Los Chaos is a district in the Carache Valley some 5 kilometers downstream from the town, on the eastern side of the valley. The site is on an *hacienda* belonging to Sr. Benancio Espinosa, occupying the slopes of the low hills and benches bordering the valley here.

Surface indications were plentiful; sherds were also projecting from the banks of washes from near the surface to 1.50 meters below it and were present in the top soil over the whole bench back of the *hacienda*. The same conditions obtaining at Mirinday were encountered at Los Chaos, but the slopes were not so great. Trenching on the bench and back from the bank of a *quebrada*, produced no burials or signs of occupation other than sherds, which were all close to the surface on the bench, 25 cm. or less, but deeper in the *quebrada*, going to 1.50 meters or more. The sherds may easily have been re-deposited, although they showed no signs of wear.

The most productive work at Los Chaos was done on the summit and upper western slope of a low hill. Digging at the summit showed that erosion had probably removed most of the top soil, but on the slope a trench showed refuse material to a depth of 80 cm., in a dark soil with few stones. At 80 cm. a clayey soil, full of rocks, proved sterile. Refuse consisted of charcoal and ash, sherds, stone material, including a broken mano-like stone and occasional river-smoothed stones, obviously carried to the site.

### *BURIALS*

Three burials were removed at Los Chaos and several more by the usual crowd of onlookers. These latter were taken from the summit of the hill where they were found only about 15 cm. from the surface. They were primary direct burials in flexed position, and at least one was covered by a slab. In the trench on the slope an adult male was found, nearest the summit of the hill, only 25 cm. from the surface, flexed on the right side with head to the north. A meter from this burial to the south, a child was found, also near the surface, flexed under a stone mortar; this was an uneven heavy slab, 45 by 25 cm., deeply hollowed. Another adult, similarly flexed on the right side, was found in this trench, 30 cm. from the surface, under two heavy slabs, one slightly overlapping the other. These slabs were roughly irregular and showed no signs of use. As at Mirinday, none of these burials were particularly oriented nor had they any funeral furniture with them; charcoal was not noted in concentrations over the burials as at Mirinday.

## THE CAVE OF SANTO DOMINGO

Some 20 kilometers up the Valley of Carache above the town, the Cave of Santo Domingo was discovered in 1920, and a considerable body of material removed from it in the following year.[1] We did not visit the cave, since it had been looted; it was described as a large cavern with a small entrance which had been carefully covered with slabs. The material found within has been in part described by Jahn and by Briceño-Iragorry,[2] and the available pieces in various collections are described below. From the nature of the material, large figurines, zoömorphic vessels and other elaborate pieces, it seems clear that the cave was used as a repository for ceremonial objects by the Carache or other people, or that, as Jahn suggests, it was hidden from the Spaniards. It may even be possible that the Santo Domingo cave contained the ceremonial objects of a group quite distinct from the inhabitants of Carache itself, since the painted style of these pieces is more typical of other

[1] Jahn, 1927, pp. 319–320.

[2] Briceño-Iragorry, 1928.

parts of Trujillo than of the Carache ware from Mirinday and Los Chaos. These distinctions are pointed out below; here it may be pointed out that whatever the cultural affinities of the Santo Domingo cave material, there is every evidence, both from its nature and the nature of the cave, that it is not a sample of the every-day ware of any group and, as such, is not comparable to the sherds from the two sites farther down the valley.

## CULTURAL REMAINS

### *CERAMICS*

For purposes of classification and description, Carache pottery may be divided into three major types. These types occur in equal proportions at both the Mirinday and Los Chaos sites and so may be described as units. The types represented are a Plain, unslipped Red, a Red on Red painted but unslipped, and a Red on White slipped and painted. There is considerable variation in the external appearance of sherds within each group, but there is no basis for further subdivision of the material excepting for a single sherd which shows the combined Red on Red and Red on White techniques; on the basis of a lone specimen it is, of course, impossible to establish a separate type. In classifying the Carache wares, as well as those of Lake Valencia, the criterion for sorting has been exclusively surface treatment. This does not mean that appearance alone has been a basis for selection. Rather the opposite has actually been the case, since many plain specimens have become so changed in color through firing or during subsequent use that several new wares might have been established had it not been for a sufficient number of large sherds in the collection, which showed that, among the unpainted pieces, only one ware was actually represented.

**Plain Red Type.** This type occurs at Mirinday and at Los Chaos about six times more commonly than all painted ware combined. It is obviously the common, utilitarian and culinary ware of Carache. Color is a plain unslipped brick red; there is no paint. Most sherds are from globular jars of varying size with outcurved rims and heavy loop handles, but there are a few fragments of bowls, platters or griddles and tripod *incensarios*. A curious type of notched lug handle is common. Leg, leg-ring bases and annular bases are very rare. Decoration is sparse, entirely plastic; its two main features are an applied meandering punctate strip and simple modeled heads with pitted shoe button eyes.

A. SURFACE FEATURES. (1) Color. Surface colors vary greatly, as a result of differences in the firing of various vessels and differences in effects of firing on the same vessel. Reds themselves fairly constant, varying from 9″ (Testaceous) to 11″ (Vinaceous Tawny), with darker shades, 9″i (Cacao Brown) and 11″i (Pecan Brown). Lighter tints absent; lack of oxygen in firing, unintentional smothering, or fire-clouding, has resulted in large patches of black and dark gray. The difference between small sherds is often striking; some are quite black, others thoroughly oxidized, and the usual reds. On several large sherds areas of red and black are nearly equal, but black all unintentional.

(2) Hardness. Average compacted surface 4–, range, 3.5 to 4.5.

(3) Evenness. Surfaces as a whole not perfectly planed. In many cases, not always on large vessels, interiors of jars have been so hastily smoothed that original coils of which the vessel was constructed are perfectly visible, sometimes with marked indentations between coils which have been left unsmoothed. Exterior surfaces uneven, with parallel ridges produced by the rubbing stone on plastic clay; no Carache pottery shows signs of use of paddle and anvil finishing technique. Some polished areas on necks or under handles.

(4) Texture. Smooth, for the most part, although some outer surfaces and nearly all interior surfaces are rough, uncompacted.

(5) Luster. Some sherds slightly lustrous.

(6) Slip. Absent, checked by Miss Shepard.

(7) Defects. Rare. Some abrasion and crazing, probably due to weathering.

B. PAINT. Absent.

C. PASTE. (1) Color. Some 60% red, remainder gray. Reds vary from 9″h (unnamed), 9″i (Cacao Brown) to 11″ (Vinaceous Tawny) with 11″b (Onion-skin Pink) also represented. Grays are various dark shades of Neutral and Carbon gray. Zoning not uniform; gray flanked by red. Gray pastes are correlated with fire-clouded external areas.

(2) Inclusions and Clay. Inclusions coarse. Miss Shepard reports that temper consists of fragments of sedimentary and metamorphosed rock-sandstone, siltstone and schist. These are light or dark brown or silvery gray. In each sherd examined different assort-

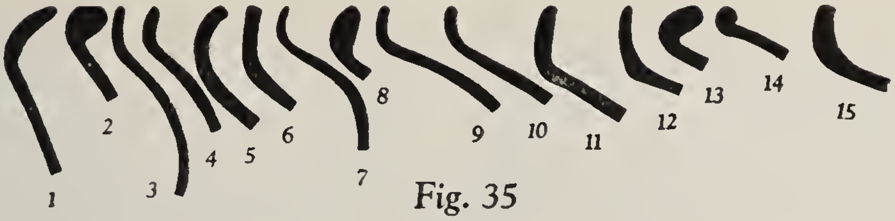

Fig. 35

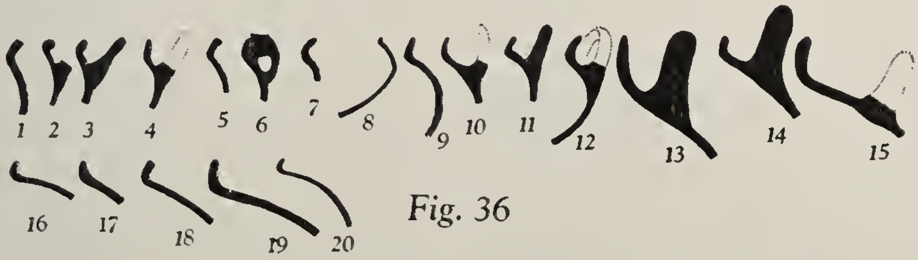

Fig. 36

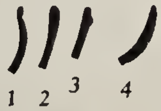

Fig. 37

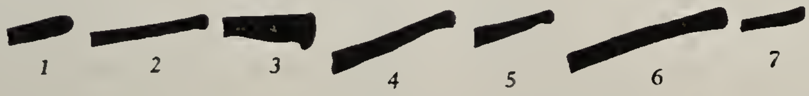

Fig. 38

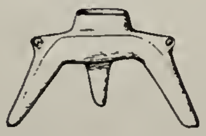

Fig. 39

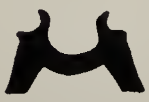

Fig. 40

Fig. 35. Carache Plain Red jar rim sections, ¼. Fig. 36. Carache Plain Red small jar rim sections, ¼. Fig. 37. *1–4*, Carache Plain Red bowl rims, ¼. Fig. 38. Carache Plain Red griddle rim sections, ¼. Fig. 39. Carache Plain Red incensario, ¼. Fig. 40. Carache Plain Red incensario in section, ¼.

ments were visible, but this variation was undoubtedly not intentional.

(3) Texture. Heavy, coarse temper; granular, dense.

(4) Fracture. Break straight across at right angles to vessel surface, rough, granular.

(5) Hardness. Average 4–.

D. STRUCTURE. Coiling, as noted from surface undulations and breaks along coil lines.

E. SHAPES. Very few accurately restorable vessels found at Carache, but from rims, large sherds, basal fragments and notation of shapes from material in one or two private collections and museums, a reasonably certain approximation of shape can be made.

Jars. Globular jar with outcurved rim most usual, varying considerably in size. Largest may have approximated some of the Lake Valencia burial urns, attaining as much as a meter in maximum diameter and nearly a meter in height. Rim sherds (pl. V, *29–36*) and basal sherds indicate rounded vessels lacking supports. Smaller jars very common; show most evidence in Carache ware of use as cooking pots. Rims found to be always outcurved (fig. 36). Bases rounded and supports probably lacking in most cases.

Bowls. True bowls very rare, although most usual in painted types. Only four apparently fragments of bowls. Fig. 37 shows rims; there is no indication of total shape.

Griddles. Heavy griddles, not uncommon at Carache sites, but represent only a small fraction of all sherds. Not made perfectly flat, but with a central depression (fig. 38). No unmistakable evidence that these were equipped with "flat" type of handle, but many probably were.

High Necked Jar (?). One sherd may be from the neck of a rather wide mouthed bottle-shaped vessel, but there is not enough of it to be absolutely certain of the rim diameter; it may have been the rim of an unusually high necked jar.

Incensarios. For want of a better descriptive term, the curious, small cup-like vessels mounted on tripod legs have been termed *incensarios*, although there is no direct evidence that they were used for burning incense. Locally they are so called. Pl. XIII, *4, 5, 6* shows three fragmentary specimens; the complete specimen (fig. 39) from Carache is in the American Museum of Natural History. Rim of the center cup varies from straight to everted, but the cup itself is always solid and heavy.

Annular Bases. Rare, several broken annular bases (fig. 44, *1*) may have been from medium sized jars.

Leg-Ring Bases. Represented by three specimens (fig. 44, *11*). Really a modification of the true leg-ring type appearing much the same as a perforated annular base. Low, legs flat in section. No indication of shape of superimposed vessel.

Legs. A number of loose legs, some obviously from tripod *incensarios*. Others, very much larger and heavier, but similarly solid, apparently supports for some type of rather low vessel, may have been used in sets of three or possibly four (pl. XIII, *7–10*).

Handles. From profusion of specimens it is evident that many jars of all sizes and apparently platters as well were equipped with handles. Three major types:

horizontal loop handles. By far the most usual type. Fig. 36; pl. XIII, *1, 2, 3* show they were applied to small and medium sized jars; the "flat" type, essentially the same handle, was almost undoubtedly used on platters. Size, from 6 to 15 cm. in total width on vessel shoulder, varies with size of vessel. Shape, a smooth flattened arc (pl. XIII, *11–16*). Most decorated with meandering appliqué and punctate strips continuing around the pot and over the handles. Some have modeled head or split node. All round in cross section. Two specimens (pl. XIII, *11, 12*) are of twisted strips. "Flat" type (pl. XIII, *17, 18*) probably associated with platters, also round in cross section excepting at points of attachment.

vertical handles. Rare. Two complete specimens (fig. 36, *6*).

heavy lug handles. Thick lug, round in cross section, luted to the body of large jars, apparently on the shoulder just below the rim (pl. XIII, *19–23*). With one exception, lugs of this sort are split or notched deeply at the end, horizontally, in the same plane as the diameter of the vessel. Only one found placed just below a rim; some others may have been set considerably lower down. In length from vessel wall there is a variation of from 3 to 5 cm. Possibly attached on four sides of large jars, with cord lodged in notches, but no notches show signs of wear.

F. DECORATION. Rare, chiefly applied strips (pl. XIII, *24–28*) plain or, more usually, marked with punctation. Simple modeled animal heads with pitted shoe button eyes (pl. XIII, *10, 13, 17, 18*). Incision very rare (pl. XIII, *13, 14*).

**Red on Red Type.** The Red on Red type of painted ware is chiefly distinguished from the Plain Red ware by the addition of dark red paint to the surface, but there are other differences in form and decoration indicating that the potters who made it had a rather different product in mind. The combination of features of shape and decoration which the Red on Red type, as a whole, shares with the Red on White type shows that they are far more closely related to each other in these respects, and undoubtedly in function as well, than are either of them to the obviously utilitarian Plain Red type. Low open bowls are the commonest shapes; most were probably supplied with leg-ring bases or hollow tripod legs, and possibly some with annular bases. Jars must be reconstructed from sherds. Globular narrow mouthed jars, some apparently with annular bases, and wider mouthed low specimens were both made. The typical Plain Red loop handle is absent, but some narrow mouthed jars were equipped with low vertical strap handles. Plastic decoration is rare and is always in association with paint. As far as can be determined from a collection which consists almost entirely of sherds and a few restorable vessels, paint was nearly always applied within encircling bands on both exteriors and interiors. There are nine fairly distinctive types of arrangement within such bands, most of which are correlated with a particular vessel shape or position on jar or bowl.

A. SURFACE FINISH. (1) Color. Background colors in general much the same as those of Plain Red. Vary from 9″ (Testaceous) to 10″ (unnamed), to 11″ (Vinaceous Tawny). Lighter tints of 11″ are 11″a (unnamed) and patches as light as 11″b (Onion-skin Pink). Darker shades of 9″, 9″h (unnamed), and 9″i (Cacao Brown), common. A few pieces, probably as a result of unintentional smothering, approximate 9″ ″b (Light Brownish Drab). Some smothered areas actually black, but chiefly Carbon Grays, varying from Slate color through Slate Gray to Dark Dull Gray. Interiors of such areas Slate Gray. Borders of fire-clouded areas are often dark brown, 11″i (Pecan Brown), 11″j (unnamed) and 11″k (Rood's Brown).

(2) Hardness. 3.5 to 4.5 for compacted surfaces.

(3) Evenness. Well smoothed, with marks of polishing stone, some undulations and depressions.

(4) Texture. Surfaces smooth.

(5) Luster. Some low luster.

(6) Slip. Absent; this observation has been verified by Miss Shepard.

(7) Defects. Abrasion and crazing very rare.

B. PAINT. (1) Composition. Haematitic, according to Miss Shepard's report.

(2) Color. Dark red; 1″k (Mineral Red), 1″j (unnamed), a slightly lighter tint, 1″k (unnamed) and

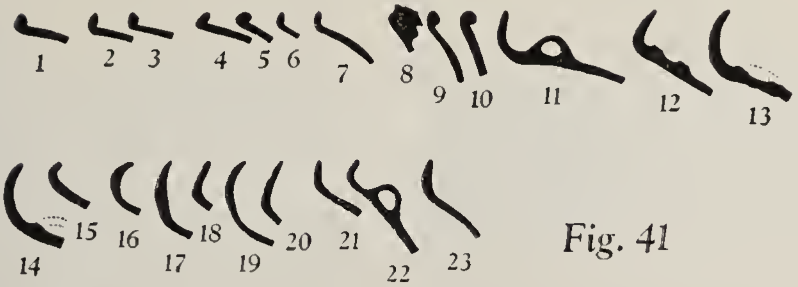

Fig. 41

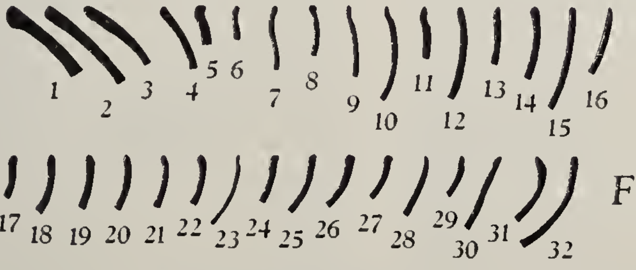

Fig. 42

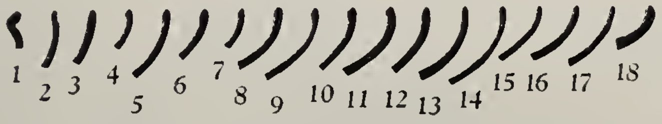

Fig. 43

Fig. 41. Carache Red on Red jar rim sections, ¼. Fig. 42. *1–32*, Carache Red on Red bowl rim sections, ¼. Fig. 43. *1–18*, Carache Red on White bowl rim sections, ¼.

1″m (Dark Mineral Red). 5″m (Haematitic Red), also represented. Darker shades more common. Variations in shade largely due to heaviness of the mixture, that is, lighter tints are thin. In some cases, on heavily fire-clouded sherds, paint has faded to grayish red, approximately 9‴ (Brownish Drab), 9‴b (Light Brownish Drab) and even as light as 9‴d (Pale Brownish Drab).

(3) Luster. Absent; paint is matte.

(4) Relief. Pronounced, as usual in mineral paint.

(5) Hardness. 2.5 average.

(6) Evenness. Unevenness in application evident in variation in thickness of paint at various points. Marks of a freshly dipped brush in contrast to those of an exhausted brush very evident.

(7) Defects. Little spreading, after rare abrasion, peeling and crazing.

C. PASTE. (1) Color. Reds, 11″ (Vinaceous Tawny), 11″c (Pecan Brown); lighter tints are 11″a (unnamed) and 11″b (Onion-skin Pink). Darker shades of Testaceous, 9″h (unnamed) and 9″i also represented. Grays, Neutral and Carbon Grays. As in Plain Red, there is a correlation between fire-clouding on the surface and color of paste. Gray pastes occur in interiors of fire-clouded areas and as zones in the interior of a number of red surfaced sherds. Zoning may be present only in certain parts of a sherd.

(2) Inclusions and Clay. Tempering material noted by Miss Shepard was, with two exceptions, ground sherd material. Sherds used for this purpose were of the same ware, since coarse mineral matter, such as used in Plain Red ware, is very rare. Clays similar to those used in Plain Red ware.

(3) Texture. Percentage of ground sherd temper indeterminate. Grains fine to medium, occasionally coarse. Granular.

(4) Fracture. Break straight across, at right angles to vessel wall; smooth and fine, some rough and granular large pieces.

(5) Hardness. Average 4–.

D. STRUCTURE. Regularly spaced circular undulations on interiors of closely constricted necked jars, breakage along coils is evidence of coiling.

E. SHAPE. Sherds indicate only two major shape groups, jars and bowls, of equal frequency. Within each category there is a wide range in details of form.

Jars. Range from narrow mouthed globular vessels with closely constricted orifices (fig. 44, *15*, *18*) to lower, wide mouthed vessels with maximum diameters greater than heights, almost bowls but for restriction of orifices (fig. 44, *12*, *13*). Rims always outcurved (fig. 41), but no completely restorable pieces. Basal sherds entirely lacking, aside from rare annular bases; most jars probably had simple rounded bases.

Bowls. (a) With slightly restricted orifices, represented by not more than half a dozen pieces, one of which can be reconstructed with accuracy, except for the base (fig. 44, *14*). Fig. 42, *1–4*, cross sections of rims from similar vessels. (b) Open bowls (figs. 45, *13–18*; 46, *1–9*), deeper, straight sided to shallow types, same range in rim sections (fig. 42, *5–32*). Rim diameters range from 12–17 cm. Basal sherds insure accuracy of reconstructions.

Basal Supports — Annular Bases. Jars probably sometimes supported by annular bases (fig. 44, *3*, *4*). All examples provided with holes in the walls, the so-called "air-draught" hole. Only one annular base shows any painted decoration on the interior of the base of the vessel which it supported, indicating that this was a bowl. All others are but roughly smoothed on interiors, in some cases scarcely obliterating coils; evidence that jars were the usual forms supplied with annular bases.

Leg-Ring Bases. Commonly used to support bowls (fig. 46, *1–4*). No evidence that bowls reconstructed from sherds (fig. 45, *13–18*) had leg-ring bases, but it is highly probable that they did, due to a large number of fragments of such bases (fig. 44, *6*, *8*). All evidence from basal sherds points to the fact that leg-ring base was universally tripod. Three solid legs were luted to the base of the bowl, and these were attached in the same way to the basal ring. Rings, with one exception, made in two parts by the superposition of one ring of clay upon another. Interior smoothed off as the two were pressed together, but on the exterior there is always a groove at the juncture of the two. Lower ring was flattened, with some flare, so that the cross section (fig. 44, 7) has somewhat the appearance of a comma, tilted to the right. The single exception (fig. 44, *9*, *10*), an extremely low leg or foot, set on a single ring, round in section.

Legs. Hollow tripod legs (fig. 46, *10–13*), luted to wall, common on shallow bowls. Modeled animal head and legs apparently present in most cases; horseshoe-shaped band of clay on interior indicates method of attachment; small hole at top is found in about half of whole specimens, undoubtedly a means of allowing air to escape during firing, although in many cases hollow legs have no outlets. Thickness of walls of hollow legs varies from 5–8 mm.

Handles. Low, fairly flat vertical strap handles high on shoulder, probably two to a vessel, appear to be limited to narrow mouthed jars (figs. 41, *11–14*, *22*; 44, *15*, *16*, *18*), the latter showing handles in cross section in connection with rims. Constructed from three or four separate thin rolls of clay, set close together and covered at points of attachment to wall by bits of clay smoothed around them. Two single vertical handles differ from the type. (1) A simple solid strap handle, attached to shoulder of a somewhat less narrow mouthed jar. (2) A thin, nearly flat strap, running from shoulder to lip of jar; the lip is surmounted by a quadruple incised projection (fig. 44, *19*). Whether horizontal handles were present is uncertain. Two rim sherds from small jars show that some large attached element has broken from the rim (figs. 41, *8*; 44, *20*). The size and oval cross section of the broken part seems to indicate that a handle was attached here; the base below the break is definitely inclined to the right, possibly indicating that a loop handle similar to Plain Red type was placed on the rim.

F. DECORATION. Primarily decorated by painted design, secondarily by additions to the surface, which may be altered by modeling, punctation or incision.

Plastic Decoration. Applied strips with punctation occur on shoulders of some jars (figs. 44, *12*; 45, *1–6*). Painted decoration always found within spaces outlined by appliqué. Simple low nodes usual on exteriors of bowls, just below the rim. Position seems to be determined by painted design, or possibly nodes were used as markers to divide the bowl into thirds or quarters as a guide in painting.

Incision (figs. 44, *19*; 45, *13–16*) confined to cross-incising of vertical rim projections, rare, as are rim projections. True modeled decoration only on legs; each of two types is confined to a particular type of leg. Head and front legs of an animal always found on hollow tripod legs. Probably about half of these legs (fig. 46, *5–13*) had no modeling; the remainder have pitted shoe button eyes, slit mouth and pitted node legs. Conventionalized modeled faces appear on legs of all but one leg-ring base fragment (figs. 45, *18*; 46, *1–4*).

Painted Decoration. The primary step in planning design on Red on Red vessels was apparently the delimitation of an encircling band, whether on the exterior or interior of bowls or the exterior of jars. Within banding lines variations occur, but cases among Red on Red sherds where the design did not seem to have been first conceived as part of a band are very rare.

BANDED TYPES.

*The first type of band.* There are some sherds which may have been parts of banded vessels, but which are often not large enough to show it. In these, decoration appears limited to blobs of paint and rough vertical sided panels of cross-hatching (figs. 44, *13*, *20*; 45, 7). However, there is evidence as to the extent of the cross-hatched panel, which was cut off by an encircling line; this throws the whole complex within a band of which the rim, or one or two lines just below it, may represent the upper boundary. Fig. 45, 7 shows a sherd on which blobs alone appear; it is probable that there was some banding here also, framed between rim and a possible line lower on the vessel wall. This type of band, containing cross-hatched panels at intervals, or perhaps blobs of paint, is the simplest and most hastily applied sort of painted work. It is confined to jars with relatively wide mouths, with rims of the type illustrated in fig. 41, *1–10*.

Besides the simple, hastily executed types of decoration described above, there are eight additional general types of band enclosed motifs, each formalized to such an extent that there is very little variation except in minor details. In each case there is an evident correlation between the nature of the design employed and the shape and part of the vessel to which it is applied. In many cases these correlations are absolute, that is, certain designs occur only on certain parts of a particular type of vessel. Other motifs may occur throughout the range of shapes and on various body parts.

*The second type of band* (fig. 44, *15–18*) occurs only on the upper bodies and shoulders of narrow mouthed jars. Since there is a rapid expansion of the diameter of these vessels from the rim, a band which

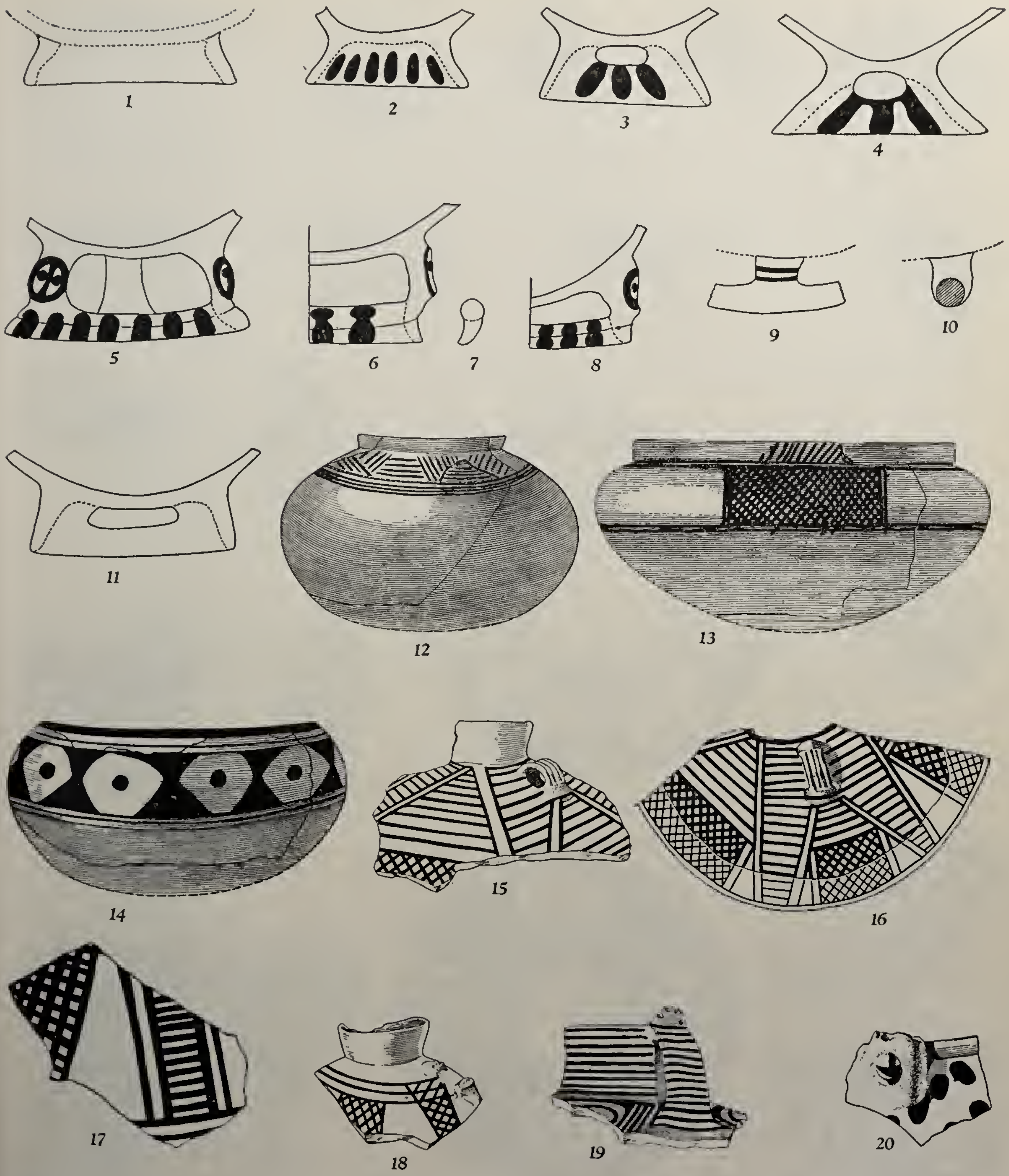

Fig. 44. *1–11*, Carache vessel bases, ⅓: *1*, plain red annular; *2*, red on white annular; *3*, *4*, red on red annular; *5–10*, leg-ring; *11*, plain red leg-ring. *12*, Carache Red on Red jar, ¼; *13*, Carache Red on Red jar, ⅓; *14*, Carache Red on Red incurved rim bowl, ⅗; *15–18*, Carache Red on Red narrow mouth jar sherds; *15*, *18*, ¼; *16*, *17*, ⅓; 19, Carache Red on Red jar rim sherd; *20*, Carache Red on Red jar sherd with possible loop handle.

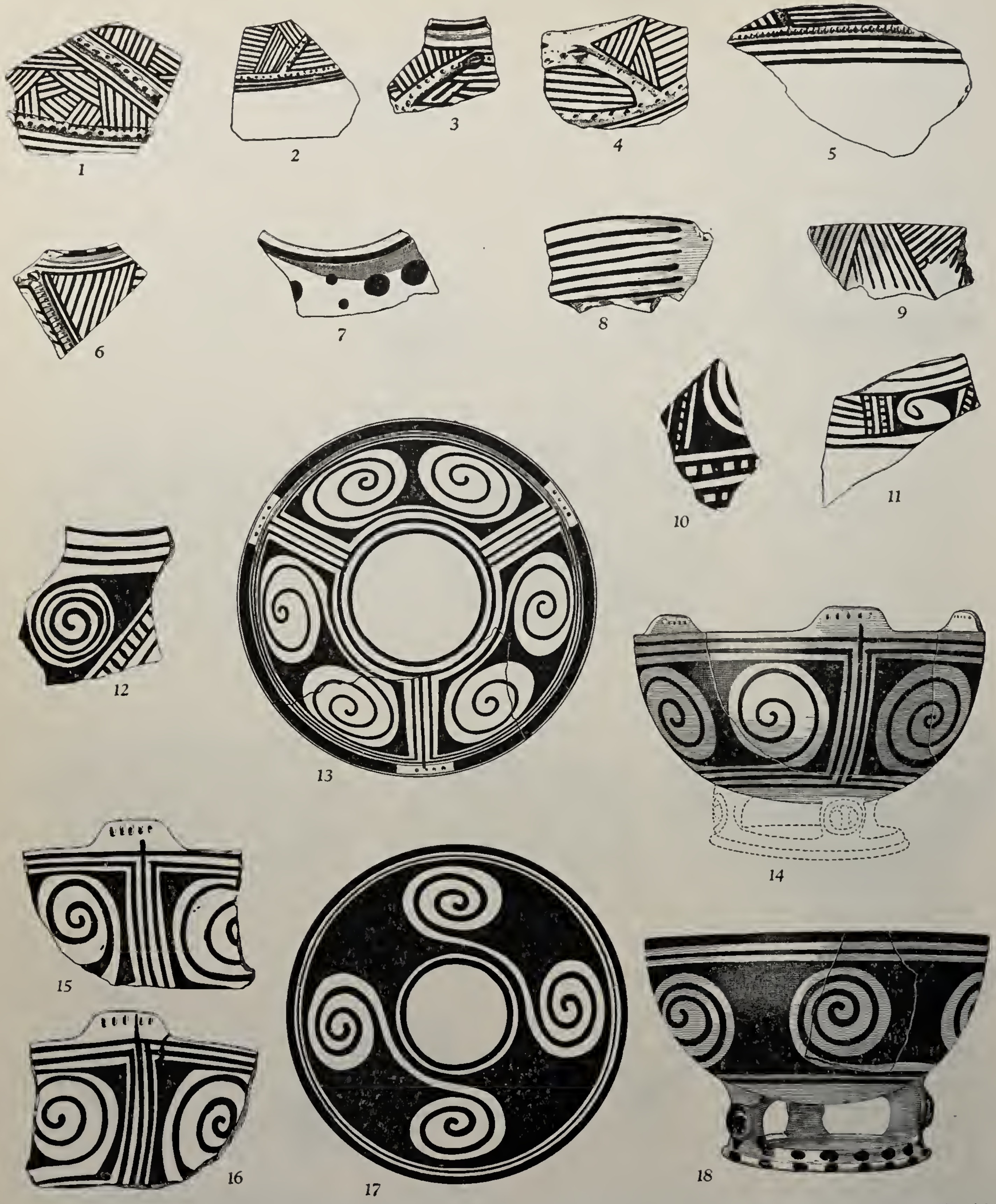

Fig. 45. *1–6*, Carache Red on Red jar sherds with appliqué, punctate strips; *7*, Carache Red on Red jar sherd with "blobs" of paint; *8*, *9*, Carache Red on Red jar rim sherd; *10–12*, Carache Red on Red jar sherds; *13–16*, Carache Red on Red reconstructed bowl; *17*, *18*, Carache Red on Red reconstructed bowl. All ⅓.

has its upper border close to the rim must therefore have a very much greater circumference at its lower border. The usual method was to start close to the rim and from there to project triangles and rectangles to the limit of the band which presumably was placed somewhat above the point of maximum diameter of the jar. Fig. 44, *15* shows how these triangles and rectangles were applied, with the low handle at the apex of a smaller triangle, which in turn fills the space between the large triangles and the rectangle below. In most cases rectangles merely filled space between the apices of the large triangles on the lower line; in the specimen illustrated in fig. 44, *18*, the design was simplified so that both triangles and rectangles were projected directly from the upper banding line. Fig. 44, *17* shows that triangles were not always used; but that blank spaces of trapezoidal shape were left between one rectangular space, cross-hatched in parallel lines, and another of "ladder" type.

Triangles as a rule were filled with a hatching of parallel lines, rectangles with cross-hatching. The illustrated specimens show that this was not always the case, however; triangles were sometimes cross-hatched, rectangles apparently always were.

*The third type of band* is also confined to a particular shape and location, the upper shoulders adjacent to the rims of wider mouthed jars (fig. 44, *12*). This banding is always associated with the punctate appliqué strip, delimiting the areas within the band to be treated as units in the design. In most cases there are two or three lower framing lines below the appliqué strip. There is considerable variation in treatment. On the jar illustrated in fig. 44, *12*, the small triangles are filled with parallel hatchure. The intervening trapezoidal spaces each have a central trapezoid flanked by two small triangles; all are filled by parallel hatchure. Sherds from similar jars (fig. 45, *1–6*) show some variation from the regularity of this, with smaller triangles, trapezoids and irregular quadrilateral figures filling the spaces outlined by the applied strips. In all cases parallel hatchure is used in the painted design.

*The fourth type of band* is very common and is not confined to a particular shape or location, although its usual position is on the exterior of shallow bowls at the rim (fig. 46, *5–13*). The design consists of sets of diagonal lines, crossing the band alternately, so that the effect produced is one of opposed triangles or trapezoids. Figs. 45, *9*; 46, *15* show the use of this design on the interior of a jar rim and again on the exterior of a bowl rim respectively. The design does not appear on the interior of bowls. Like much of the Carache painting, its application usually appears hasty but assured. No effort was made to preserve regularity of triangles or trapezoids produced as the design progressed; the painter did not take the trouble to avoid or correct the flaw which is apparent on the bowl shown in fig. 46, *10–13*, where the lines were started parallel on either side of a leg instead of converging, which would have produced a more perfect design.

*The fifth type of band* consists of diagonal lines all running in the same direction between triangles whose bases lie along rims (fig. 46, *17*). It appears chiefly on the interiors of high sided bowls and, with one exception in over a dozen cases, is correlated with the type of rim shown in fig. 42, *10*, a "pinched" rim, of which the narrowed upper area is left unpolished. The design occurs reversed in one case, that is, the solid triangle has its apex at the rim, and the lines run parallel to its sides, exactly opposite to the illustrated specimen. This single aberrant case is the one not characterized by a "pinched" rim. All cases have three extra framing lines below the banding line.

*The sixth type of banded design* consists in general of alternating triangles and trapezoids. The bases of the triangles are usually on the lower banding line, the bases of the trapezoids on the upper banding line; this has been observed in a number of sherds, but the order was sometimes reversed. It is intended to fill large spaces, particularly exteriors and, less frequently, interiors of bowls. Fig. 46, *1–4* is a reconstruction of a bowl which bore the alternating triangle and trapezoid band on the exterior. In this case the trapezoids had their bases on the lower banding line. The reconstruction of the design is somewhat doubtful, but it probably consisted of three large trapezoids each flanked by two triangles. Each group of three figures was set off by a heavy line dividing the band into three panels. Fig. 47, *1–6* show three sherds with the same general motif. It may be noted that this design probably consisted of alternating trapezoids, rather than true triangles and trapezoids, due to the cutting off of the apex of the triangle to form a trapezoid. Most sherds, however, show true triangles between the trapezoids. Whether the interior of fig. 47, *3*, *4* was decorated with this type of band is uncertain. Possibly it was, but, more probably, it had a band divided by chords, a type described below.

On the exteriors of bowls with tripod leg-ring bases, the lower framing line of the band is not circular but is actually of rounded triangular form, since the lines are carried from point to point on the base, forming the bases of the triangles which make up the design by straight rather than curved lines; the short sides of the trapezoids converge at the legs to form rounded angles.

In all opposed triangle bands on Red on Red ware there is an alternation of broad and narrow based triangles, which is not always so in the Red on White type. The interiors of triangles seem to have been universally filled on Red on Red sherds, by simple parallel hatchings, vertical, horizontal or diagonal, or by means of small inner triangles. Sometimes, as in fig. 47, *1*, *2*, these triangles were outlined in heavier lines than those employed to form the inner triangles or hatchings.

*The seventh type of band* apparently was confined to large bowls with slightly incurving rims (fig. 44, *14*). Again the use of triangles is an important factor in the design, but in this case they are merely halves of the "hour-glass" elements which make up the band. In the space between each "hour-glass" there is a round blob of paint. Above and below each main banding line there are two or three framing lines. Only three cases of the "hour-glass" band were found

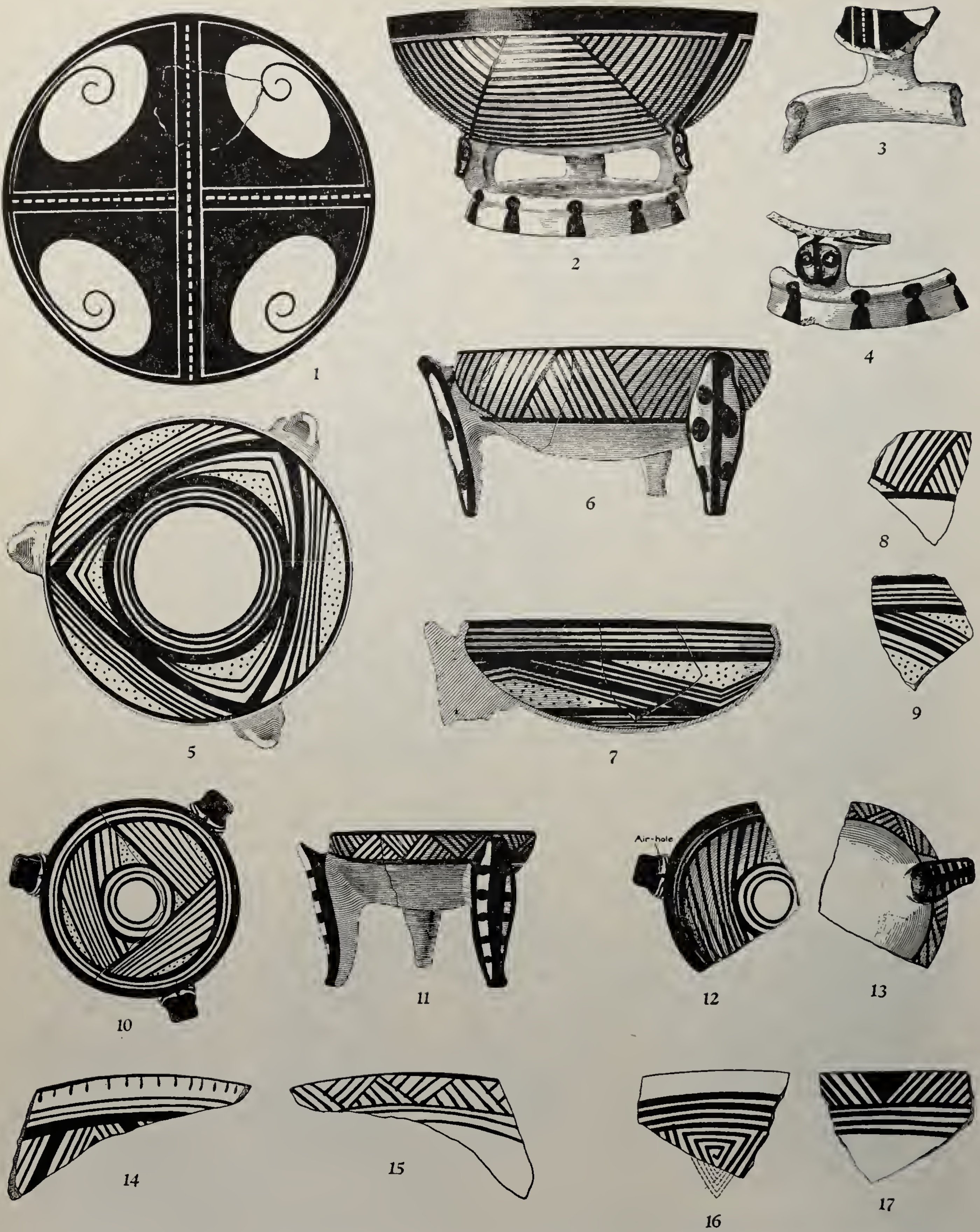

Fig. 46. *1–4*, Carache Red on Red reconstructed bowl; *5–9*, Carache Red on Red reconstructed bowl; *10–13*, Carache Red on Red reconstructed jar; *14–17*, Carache Red on Red bowl rim sherds. All ⅓.

at Carache, making it actually the rarest type of Red on Red design, in spite of the fact that it is very simple. However, the incurved rim bowls to which it was confined constitute the least common shape.

*The eighth type of banded design* was the most commonly employed in the decoration of interiors of shallower bowls. It may be called the "chord division" type. (Fig. 46, *5–13* show reconstructions.) The reconstruction (fig. 46, *5–9*) may be somewhat in error, but the drawing was based upon a number of sherds of patently similar design which furnished clues to the arrangement of this particular type of band division. For this reason, the drawing is probably a very close approximation of the original interior of the bowl. The legs were added simply because bowls of this type usually had hollow tripod legs; those depicted are of the usual type but lack the animal heads which sometimes occur on them.

The three heavy lines which form the chords, dividing the band into three elements, run between two points on the upper main banding line, tangent to the inner circle formed by the lower banding line. Three small triangles are then left, filled by thinner inverted "V's" and dots. The sherd in fig. 47, *5* is probably from this part of a similar design. Within the three main segments there are from four to six thinner line chords; the final segment nearest the rim is filled with dots. Above the true upper banding line there are three or four additional framing lines, including the painted lip of the bowl. From many sherds there is evidence that three or four additional inner circles were common. Such circles were found in the large fragment from which fig. 46, *10–13* was drawn. In the small bowl the painting was done in obvious haste and without careful planning of the design layout. From the diameters of the bowl and of the inner circle, or lower framing line, it could be calculated that no more than three chord lines could have been drawn to impinge on the heavy line inner circle. However, it was obvious that the chords did not all meet one another at their extremities to form a rough triangle, as in the case of the bowl in fig. 46, *5–9*. Furthermore, unless there were only two chords, which seemed highly improbable from the evidence of other sherds, there could only have been one true chord, as shown. In other words, to have produced three large areas, under the circumstances, two of the chords must have been cut off by the third. The usual thin-line chord and dot filled segments were left.

*The ninth type of band* is quite different from all the preceding. It may be called the spiral band. Although usually confined to bowls, both exterior and interior spirals were sometimes used on jars. In the latter case there is not enough material to hazard design reconstructions, but it is probable that the spirals represented were parts of encircling bands. Fig. 45, *10*, *12* show two cases of spirals from the bodies of jars; both were apparently set off by "ladders" which may have outlined triangles, or even rectangles, but there is no certainty of this. Fig. 44, *19* indicates that spirals were set on both sides of the vertical shoulder-to-rim handle; this is better evidence of continuous banding or paneling. The solid triangular corners of the panels, containing spirals, can be seen on either side of the handle.

Spirals are not common on jar sherds but do occur frequently on bowl sherds. Figs. 45, *13–18*; 46, *1–4*, all bowls, the first two of which probably were mounted on leg-ring bases, the third certainly so, give a better indication of the spiral band. In fig. 45, *13–16*, an obvious division of the band into panels can be seen in the original sherd. A calculation of the size of the vessel, plus the assumption that the design from one-third of the vessel was repeated on the other two-thirds, produced the reconstructed design. The only elements about which there can be much doubt are the painted areas between spirals in the same panel, and the inner circle at the center, which is frankly problematical. The frequent use of such circles to fill center space justifies the inclusion.

The band, framed at the top and probably at the bottom by additional lines outside of the actual solid corners from which the spirals sprang, contained three panels. The divisions between them were marked by three vertical lines, the center one of which extended upward onto the projection of the rim which further marked the tripartite division. In each panel spirals opposed each other, clockwise and counter-clockwise. Thus, each panel was self contained, but nevertheless all were contained within a single band. The design on the exterior of the bowl is a repetition of the interior. The execution of this particular design was rather sloppy; the drawings of the exterior and interior of the sherd, from which the design was reconstructed (fig. 45, *15*, *16*), show that slips in brush work were frequent. It is possible that the line which extends to the rim from the upper left solid triangular corner of the right hand spiral of the interior band may have been intentional, as an "outlet." However, the case appears to be unique and may well be a mistake in execution.

The reconstruction of the bowl, shown in fig. 45, *17*, *18*, was somewhat problematical, but the area of solid painting at the right of the interior spiral on the sherd seemed to indicate that there was no division of the band into panels. If this were the case the design, of necessity, would result as shown. The inner circle is again an addition, indicated from other sherds. The exterior band appears to have been a repetition of the interior, as in the case of the bowl in fig. 45, *13*, *14*. The size of the bowl is too small to permit more than two sets of opposed spirals.

Fig. 46, *1* shows another variation of the spiral motif. In this case the evidence of the small basal area above the leg of the leg-ring base points to the probable fact that there was no open central space. The result is that the design was probably not continued in a band but in four triangular panels. It is just possible that there was no cross in the center, in other words, that a paneled band existed, but although the four paneled division is not demonstrably present on any other Red on Red sherds, it occurs in several cases on those of the Red on White type. Some Red on Red sherds do have spirals separated by "ladder" lines, but they do not show the center area. The actual nature of the center cross is, of course, in doubt, but "ladder" lines with one apparently over the other in the same style may be seen among Red on White paneled sherds. The general style and direction of turn of the spirals must be correct, since the spaces to be filled by them could hardly have been larger. The distance from the solidly painted area, from which the spiral springs, to the first sign of the spiral itself is so great that there would have been no room for a larger one with several full turns.

Fig. 47, 7, *8* show a sherd, from close to the base of a bowl, which had decoration in spirals both on interior and on exterior. There is no possible means of reconstructing this design, nor are there any clues to be gained by a study of other sherds of similar type. The sherd shows evidence of former attachments to a leg-ring base, and the external pattern appears to have been part of a band, but it is impossible to determine just how the large, solidly painted areas were set off from each other.

Fig. 45, *11* shows a curious band element, also unique. This design was placed on the shoulder, apparently close to the neck of a jar. It obviously was a band containing various elements, including simple hatchure, two vertical "ladders" and a spiral or hook set horizontally in the band. Strictly speaking, this is not entirely a spiral motif but is included here because the spiral is so obviously an important element in the band.

Fig. 46, *16* shows a sherd of the type characterized by "pinched" rim, and with the typical fifth type of band, made up of solid color triangles, pendent from the lip band, framed with diagonal lines. The outside decoration of this type of bowl sherd appears to have always been the same, consisting of angular scrolls, set between some type of figure or system of hatchure, which none of the half dozen examples are large enough to indicate. This is the final design which may be included among the spiral motifs, banded or otherwise.

OTHER DESIGNS. The nine band types contain nearly all elements of Carache Red on Red design. There are two cases where the observable design does not seem to fit into any of the above categories, however. The first of these (fig. 47, *9*) is a rim sherd from an incurved rim bowl, of the type which usually bears the "hour-glass" band. In this case some paneling is obvious, but there is not enough of the design to tell how the panel, which enclosed the round blobs of paint, was arranged in relation to the band, which probably encircled the bowl.

The second case is that of a fragment from a shallow bowl which shows evidence of having been mounted on tripod legs (fig. 47, *10*, *11*). The exterior shows the end of a panel which was probably duplicated on the other side of the leg, but which could not continue over the leg on account of its rather low position, in contrast to the usual high position of bands on exteriors of tripod, hollow legged bowls. The thin-line filling of this exterior panel recalls the third band type, in which triangles, trapezoids and irregular figures were set off by appliqué strips. This panel is one of the very rare cases in Carache Red on Red design where there is not a continuous band encircling the vessel. The interior decoration of the same sherd is very different from other examples, although in all probability it was contained within a band. It is impossible to reconstruct this design; the comb-like element is reminiscent of those used so commonly in Red on White decoration.

*Paint on rims, basal supports, legs and handles.* The term "design" can hardly be used in this connection, since no true designs were carried out. The lips of rims were almost always painted with a band of varying width, usually just sufficient to cover it and lap over a bit on both sides. Sometimes, rarely, "ticks" were run off from this lip line (fig. 46, *14*). Notable exceptions to this are the rims of narrow mouthed jars. On the exterior of jar rims, in some cases, apparently those on which handles were attached at the lip, simple horizontal lines were run around the neck between lip and shoulder, terminating on either side of the handles (figs. 44, *19*; 45, *8*). The interior of the former rim has straight, closely spaced vertical lines running from the lip nearly to the curve of the shoulder.

Annular bases were apparently always given a distinctive marking (fig. 44, *3*, *4*) in the form of three lines from the perforation of the base to the foot; this occurs on all annular base fragments of Red on Red type where it is possible to observe side perforation.

Leg-ring bases painted in a similar formalized manner. Figs. 44, *6*, *8*; 45, *17*, *18*; 46, *1–4* show the spaced blobs of paint on the basal double-coil ring and the paint on the conventionalized modeled faces which adorn the legs.

Hollow tripod legs vary little in painted decoration (fig. 46, *6–13*). There are three heavy vertical lines on the leg, with round blobs of paint, between the inner and the two outer lines. One hollow leg is decorated simply by straight horizontal hatching in thin lines, framed between two verticals. This is the only example of anything but the usual three line and blob decoration.

Handles usually bear no painted decoration. The common low, flat, vertical type, present on the shoulders of narrow mouthed jars, was never painted. The only painted handle in the collection of Red on Red sherds is that illustrated in fig. 44, *20*, which has simple horizontal hatching in thin lines, confined to the outside surface.

**Red on White Type.** Wares of Red on Red and Red on White types represent approximately one-sixth of the pottery from the two Carache sites. Red on White type sherds were found to occur only about half as often as Red on Red. This definitely places the Red on White as a minor factor in Carache pottery, but it is, nevertheless, the most striking and distinctive group of all. In design it is closely allied to Red on Red, but it has certain very clear cut characteristics of its own, setting it off very distinctly as a type.

Technical features differ from Red on Red only in the use of a thick white slip. Shapes were almost exclusively bowls, often with hollow tripod legs or leg-ring bases. Annular bases are very rare. Handles are absent in the collection. Plastic decoration is rare, as in Red on Red. Painted design consists chiefly of paneled bands, with some unbanded panels and some fragmentary unclassifiable designs.

A. SURFACE FEATURES. (1) Color. Background color creamy white (unnamed on Ridgway's scale) on sherds in good condition. A few sherds blackened through firing, but no definite marks of use to account for post-fired blackening. From this and other wares it is apparent that Carache potters could not always eliminate large unintentionally smothered areas.

(2) Hardness. Rare unslipped surfaces, on exteriors of leg-ring bases, leg-ring base interior surfaces, etc., average 4 plus. Slipped surfaces average 3 plus.

(3) Evenness. Not truly even but more carefully planed and smoothed than other wares. Irregular surface undulations indicate use of a smoothing tool while vessel was in a soft state. Most unslipped surfaces bear marks of smoothing tool and fingers. Slipped surfaces polished with a stone or similar tool, showing unevenly spaced fine striations and fine parallel ridges. On the whole polished with greater care than unslipped wares.

(4) Texture. Slipped surfaces definitely smooth. Rare unslipped areas carelessly smoothed, but not rough. Two sherds from large bowls or open jars have very finely compacted, unslipped interior surfaces, representing smoothest textured surfaces to be found at Carache.

(5) Luster. Unslipped surfaces dull. Slipped surfaces in good condition are lustrous. Marks of the polishing tool prevent highly lustrous surfaces.

(6) Slip. Thick, easily seen with the naked eye on a freshly fractured cross section.

(7) Defects. Some abrasion, due to softness; very little peeling in spite of thickness. A few cases of crazing, probably due to weathering of surface sherds; spalling absent.

B. PAINT. (1) Composition. Haematitic, according to Miss Shepard's report, with marked relief, lack of penetration and lack of luster, all of which are characteristic of mineral paints. Appears exactly the same as Red on Red paint.

(2) Color. As in Red on Red, considerable variation. Some actually black, but there are marked changes within a few centimeters to red hues, indications that black and very dark reds were probably produced by slight firing differences. Usual range from 1″ to 5″, shades "k" to "m" all represented. They are termed Mineral, Indian and Prussian Red from 1″ to 5″; "k," "l" shades unnamed; "m" shades Dark Mineral, Dark Indian and Haematite Reds. Lighter tints rare; some examples of tints approximating 5′i (Dragon's Blood Red). Depth of shade obviously conditioned by thickness of paint.

(3 Luster. Like that of Red on Red, matte.

(4) Relief. Marked, more so than is apparent in Red on Red ware, possibly due to the fact that penetration was cut to a minimum by slip. It appears rough in texture, much thicker in some spots than in others; newly dipped brush strokes easily seen; several coatings build up relief producing darker shades of color.

(5) Hardness. About 2.5.

(6) Evenness. Uneven application characteristic.

(7) Defects. Considerable abrasion, some peeling, very little crazing, and little spreading.

C. PASTE. (1) Color. Variations from reds to grays. No very apparent correlation between gray pastes and fire-clouding, since few of the slipped surfaces are fire-clouded, but where they are, paste color is gray. Majority red, on the whole lighter than other wares. 5′ (Coral Red) most common, 11″ (Vinaceous Tawny) represented as in other wares, 9″i (Cacao Brown) and 11″i (Pecan Brown) occur in some cases; lighter tints, fairly common, approximate 1′b (Apricot Buff). Grays various tones of Neutral and Carbon Gray; Pale Neutral Gray, Slate Gray and several lighter shades of Carbon Gray. Fairly uniform, but changes within a single sherd occur where firing has been uneven. Zoning rare, some thin red zones flanking gray interior, some on one side only.

(2) Inclusions and Clay. Same as Red on Red.

(3) Texture. Fine to medium, granular. Percentage of temper indeterminate.

(4) Fracture. Breaks at right angles to vessel wall. Fractured surface usually smooth and fine, sometimes slightly rough and granular.

(5) Hardness. Varies from 3.5 to 4.5, averaging about 4–.

D. STRUCTURE. Only sherds showing evidence of coiling technique are three from vessels with unslipped interiors, with typical regular undulations characteristic of coiling not completely smoothed.

E. SHAPE. Sherd collection indicates that bowls were almost the only type of vessel. Only four sherds, none with rims intact, have unpolished and unslipped interior, which, combined with some indication of globular body shape, seems to show that a few jars were made. These sherds appear to be from jars of medium and small size; in one case the neck was probably constricted. Bowls can easily be reconstructed, although no whole bowls were found. A complete bowl with tripod leg-ring base (fig. 47, *12*, *13*), in the American Museum of Natural History, New York, collected in Carache by Spinden, exactly the same type as sherds in the Peabody Museum collection, aids reconstruction. Rim, wall and basal fragments present in sufficient numbers to assure accuracy in reconstruction (figs. 44, *1–4*; 47, *14–17*; 48, *1–15*). Range of rim sections (p. 97) shows very little variation in lip form from a wall angle. The high, straight-sided form is common in Red on Red ware; otherwise a marked similarity between bowls of the two types. Only one bowl sherd (fig. 43, *1*) in the entire Red on White sherd collection has an outcurved rim, although it is reasonable to suppose that the few jars which appear to have been made had similar rims.

Basal Supports. Generally the same as Red on Red, but in different proportions.

Annular Bases. Only one annular base found at Mirinday site. Some basal fragments from both sites may have had such bases, but this is uncertain. The single example (fig. 44, *2*) has little flare, lacks "draught hole" perforation characteristic of Red on Red and Plain Red annular bases. Slipped condition of the base of the vessel, of which it was a part, indicates that it upheld a bowl. Doubtful sherds, which may have had annular bases, are all from bowls.

Leg-Ring Bases. These appear to have been by far the most common method of supporting bowls. All basal sherds, with the exception of those from tripod bowls or annular base vessels, show leg-rim attachments. Leg-ring base fragments numerous (figs. 44, *5–10*; 47, *12*, *13*; 48, *10–15*; pl. V, *3–5*). They do not differ in essential details from Red on Red bases of same type, always appear to have been tripodal, but very low examples are absent, as are single-coil rings.

Legs. Free solid legs absent, as in Red on Red; only one good example of hollow tripod leg, from Los Chaos site, but two or three further indications of this type from both sites on bowl sherds. Single specimen (fig. 48, *6–9*) differs in shape from Red on Red examples, being wider and shorter. Top missing, probably rounded off, as shown in reconstruction. Made in one piece, luted to bowl wall.

Handles. Absent in the collection.

F. DECORATION. As in Red on Red type, two major divisions, plastic and painted; the former found less frequently on Red on White sherds than on any other type.

Plastic Decoration. Modeled decoration confined solely to conventionalized faces on legs of leg-ring bases (figs. 47, *13*; 48, *2*, *13*; 49, *2*) and to small node-like lugs on rims of bowls. This slight eminence is hardly decoration but aids in the division of the vessel into thirds for banded panel decoration, more obviously in Red on White than in Red on Red design (figs. 47, *12*, *13*; 48, *1–15*). No applied strips, punctate or incised elements of any kind.

Painted Decoration. Most Red on White design, like Red on Red, is contained in bands, but there are some cases of simple division into unbanded panels. Design elements are the same in many cases as those used on Red on Red, but there are definite differences both in the use of elements and in band paneling which stamp it as a distinct type. A classification can be made, on the basis of band and panel types, leaving a few uncertain and apparently irregular unclassifiable designs. There is a marked absence of narrow rim bands. Undecorated spaces both on the interior and exterior of bowls are rare; the usual practice was to leave a circular central space, although this was often filled in.

There is no indisputable evidence that *bands*, undivided into panels marked off by heavy bars, were ever applied. There appear to be two cases where this is a distinct probability, however, and I believe that a reconstruction of this style is justified (fig. 47, *14*). It can be seen that the right hand triangle on the sherd from which the design was taken apparently had two sides running from the base along the upper banding line of equal length, forming acute angles with the base. In fig. 47, *14* it may be noted that the right-hand triangle in each of the large panels of the bands approximates a right triangle, with the short sides perpendicular to the upper framing line. Thus, unless the band of fig. 47, *14* was divided in a two or three panel system, which does not seem likely, it must have been continuous and unbroken by heavy bars. Fig. 47, *17* shows a similar set of triangles, which, from their similarity in angles to those of the reconstructed bowl, were probably contained in a similar unpaneled band. These examples are the only ones from the entire sherd collection which might have come from such a design. The opposed triangles in each case are set between the heavy banding lines, and the sides are marked off by two and four thin lines respectively. The inner triangles, in the case of fig. 47, *14*, are "ticked" on the interior with small dots of paint, a common feature. The circles and dots of those in fig. 47, *15* are unique. The unpaneled band appears to have been confined to bowl interiors.

paneled bands may conveniently be subdivided on the basis of the number of panels which they contain; sub-types then become apparent.

*Three-panel band.* (Figs. 48, *6*; 49, *1*.) In both reconstructed designs certain details are doubtful, but the three panel division must be correct, on the basis of the size of the bowls, and, in the case of fig. 48, *6*, the panel division corresponds with the position of the tripod leg. The fact that the central circle is not in contact with the panels makes the paneling even more obvious, and it might be argued that in this case there is no true band. However, the central circle does function as a definite lower banding line, and the uniform presence of a continuous line, or lines, on rim sherds assures an upper banding line. Each panel consists of three triangles, filled by horizontal hatching. The evidence of the original sherds indicates that each group of triangles is framed by a thin line within the heavy bar panel markers.

The opposed triangle panels illustrated in fig. 49, *1* were somewhat differently conceived. Here the panels are marked off by three heavy bars from rim to central circle, but there is no evidence that open spaces were left between each panel. In this case, the evidence for paneling is weaker than that for banding, in contradistinction to the case just discussed. From the size of the bowl and the angles of the figure preserved on the sherd from which the design was reconstructed, it does not seem possible that there could have been anything but a three panel division. A system of triangles and trapezoids will not fit. The whole reconstructed design, including central circle, probable three-panel division, triangles within larger ones in small lines and dots to fill the remaining spaces, is shown by a number of other sherds to have been fairly common at Carache.

*Four-panel band.* This division cannot be proved, but it is extremely probable that there were some four-panel bands containing spiral motifs. Fig. 49, *5*, shows a sherd with spiral design set off by a

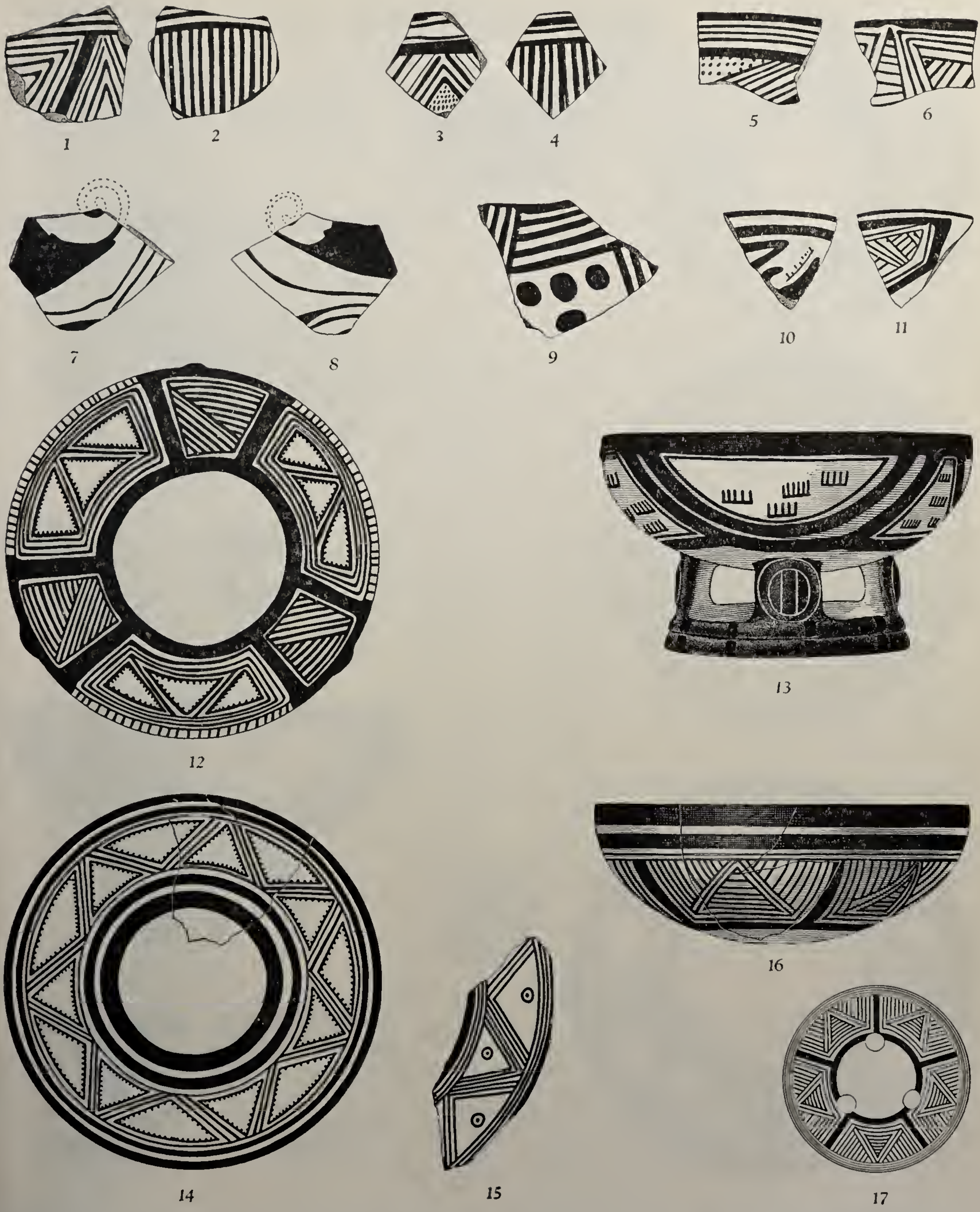

Fig. 47. *1–11*, Carache Red on Red bowl sherds, ⅓; *12, 13*, Carache Red on White bowl (American Museum of Natural History specimen, not reconstructed); *14–17*, Carache Red on White bowl, reconstructed; *16*, alternate pattern for interior; *17*, exterior design showing possible leg attachment, ⅙. All others, ⅓.

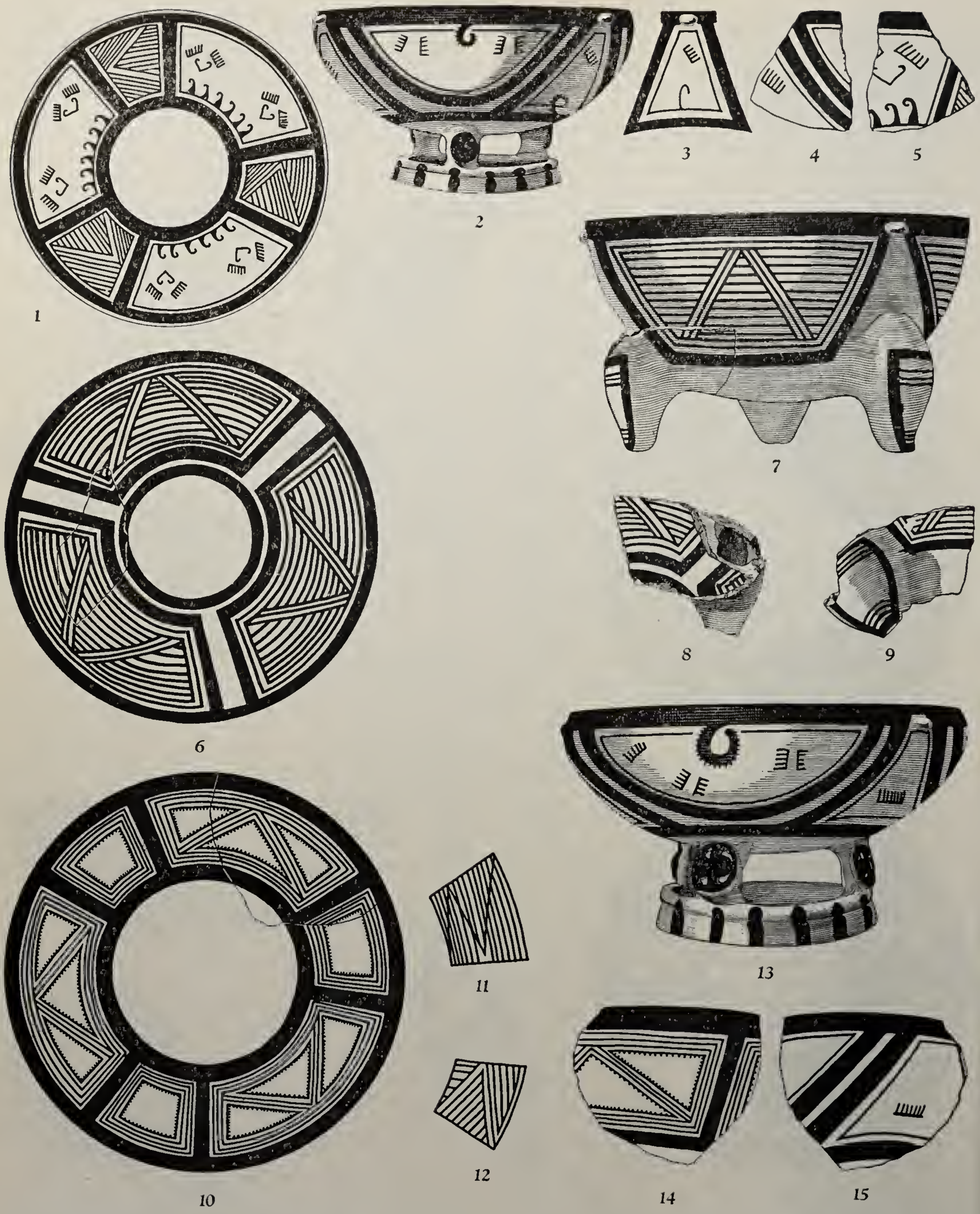

Fig. 48. *1–5*, Carache Red on White, bowl reconstruction; *3*, alternate pattern for exterior; *6–9*, Carache Red on White bowl, reconstruction; *10–15*, Carache Red on White bowl reconstruction; *11*, *12*, alternate patterns for interior small panels. All ⅓.

"ladder." The rim diameter of the bowl from which it came was approximately 17 cm. The spirals are not large enough to have covered the bottom of the bowl, so that it is probable that they formed part of a band design. If it is assumed that there were four sets of opposed spirals, each one of the size of the single example, and that each set of two was marked off by a "ladder" extending to a central circle, the result would be a four-panel band. There are a number of sherds which are decorated with spirals and which probably were in band designs, with "ladders" or simple lines to set them off, but none are large enough to provide details of their arrangement, especially in the center. It is possible that the "ladders" actually crossed in the center, as in fig. 49, *15*, *17*, producing a paneled non-banded design.

*Five-Panel Band.* Evidence for this design is better, but not perfectly conclusive. It is based on the calculation of the number of three-triangle groups which would be necessary to complete the outside design of the bowl shown in fig. 47, *16*. Five panels are necessary to do this. Each set of three opposed triangles was apparently marked off by a heavy bar. The whole was obviously part of a band, since the necessary banding lines are present on the original sherd. In this case there are two heavy upper lines, one on the rim and one below it; actually one heavy rim line is more usual, although two are not uncommon.

*Six-Panel Bands.* This is by far the commonest type of band division and shows two major sub-types. The first of these is found exclusively on the interiors of bowls. There are three large and three small panels, marked off by six heavy bars running from rim to central circle. The panels may contain a variety of elements.

The whole bowl in the American Museum (fig. 47, *13*) has provided much evidence for the reconstruction of similar designs (fig. 48, *1–5*, *13*). In this specimen (fig. 47, *12*) the three large panels each contain three opposed triangles, set within thin-line frames and adorned with "ticks." The small panels, roughly trapezoidal in form, are divided by a diagonal below which parallel hatching and above which horizontal hatching produce a pair of opposed triangles, if the original diagonal runs straight from corner to corner of the trapezoid. Sherds from the Peabody Museum collection show that similar large three-triangle panels (fig. 48, *10*, *14*) may be associated with "ticked" trapezoids in the same style as the large-panel triangles. Another sherd from Carache in the American Museum collection (fig. 49, 7) has a small panel containing two small rectangles, again "ticked." Further sherds in the Peabody Museum group show that the small panel might also contain three or four hatchured triangles as indicated in fig. 48, *11*, *12*.

Although the evidence is not quite as conclusive for the reconstruction, fig. 48, *1* was probably of related type. The six-panel design, as shown, fits the space perfectly, and there are some other sherds with the same hook-spiral, "horn," double hook and comb patterns which indicate that this was a rare, but not unique, type of large-panel design. The small panel filling, three triangles, seems justified by the direction of the lines on the original sherd (fig. 48, *5*), although any of the alternative patterns described above could have been used.

The second sub-type of the six-panel band is entirely different; it is found exclusively on exteriors. This is a more stereotyped pattern, but it also shows minor variations. It is probably the commonest design on Carache Red on White sherds and is found on most bowl exteriors. Its arrangement for reconstruction (figs. 48, *1–5*, *10–15*; 49, *2*) was greatly facilitated by its presence on the American Museum bowl (fig. 47, *13*). It may also be seen in fig. 49, *8* and further variations in fig. 49, *10*, *12*. The panels are contained between heavy rim bands and a lower banding line which is roughly circular, although, as can be seen in fig. 47, *12*, this line was often rather irregular. It is actually a division of the band into three large and three small trapezoids. The large trapezoids are outlined by the heavy bar panel outlines of the smaller, the actual panel markers. Within the trapezoids there is usually found one thin line following the main outlines of the heavy lines. Fig. 49, *12* is unique in having five. Within the large trapezoids an additional semicircular heavy line, with its extremities on the rim line, marks of a segment of a circle. Variations affect the kind, number and arrangement of elements within trapezoids and large segments. Fig. 49, *9* shows a simple and characteristic use of three comb-like elements in each division; these are always present. Fig. 49, *8* and *12* show the same, with one less comb. The sherd (fig. 49, *4*) from which the reconstruction (fig. 49, *2*) was made has the usual comb and a "ticked" hook-spiral; the latter is a very common feature on sherds. It has been added in the reconstruction in two drawings (figs. 48, *2*; 48, *13*). This was done in view of its very usual occurrence on other sherds, which seems to indicate that it was more likely to have been used than not. It does not always curve to the right, but usually does so. In fig. 48, *2* "ticked" spiral has been added to the small trapezoid; although it does not appear in the original sherd used in the reconstruction, the hook does occur in two cases in this position on other sherds. The alternate pattern, without "ticks," is also found, rarely, in the same position (fig. 48, *3*).

Combs, as noted, were always used in connection with this type of band paneling. Their execution appears to have been hasty; the number of teeth varies from four to seven. A variation of the comb is the presence of teeth on the broken inner line of the exterior large segment shown in fig. 49, *9*. This is unique.

On the whole, the six-panel band gives the impression, even more than do other Carache patterns, of hasty, but assured, application according to a quite definite notion of what should result, but with a lack of formality allowing many minor variations and freedom in the choice of component elements.

DESIGN IN PANELS FREE OF BANDS. This is rare. One example of it, obviously the result of the presence of tripod legs, may be seen in fig. 48, 7. Here the three panels could easily have been enclosed in a band, had not the height of the legs on the sides of the bowl made such a course difficult. The result is a system of panels, each containing three opposed triangles filled

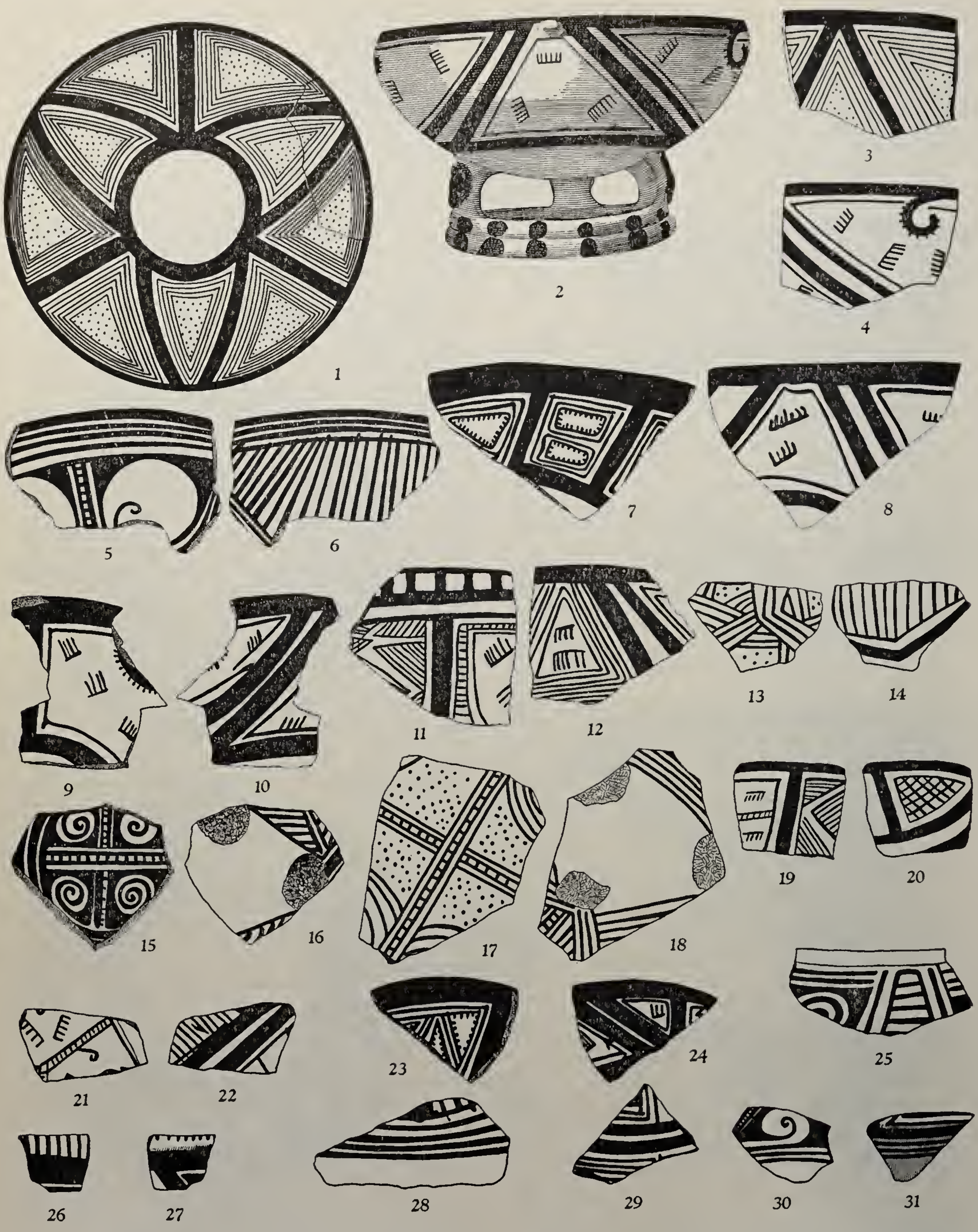

FIG. 49. *1–4*, Carache Red on White bowl reconstruction; *5–25*, Carache Red on White bowl sherds; *26*, *27*, Carache Red on White outcurved rim sherd; *28–30*, Carache Red on White jar sherds; *31*, Carache Red on Red and Red on White jar sherd. All ⅓.

by the usual hatchured lines, in this case horizontal.

Fig. 49, *13* shows an American Museum sherd, from the base of a bowl, with an irregular design on the interior. It appears to have been divided into three panels, with figures of uncertain shape contained in them. The elements used, lines and dots, are common, but the design is unique. Its exterior (fig. 49, *14*) shows a line design which might fit into either a panel or band system.

Fig. 49, *15* and *17*, the latter from the American Museum, show "ladder" crosses at the center of the bowls dividing the design into four panels. Fig. 49, *17* probably had spirals of some sort, although the four curved lines at the edges of the sherd in each panel are unique and do not appear as characteristics of spiral designs on other sherds. Fig. 49, *15* shows a small center design, also unique, complete in itself; it was probably surrounded by a band design. Each panel contains a single spiral. This design was probably used on a larger scale as well, although there are no definite examples of it among Red on White sherds. The bases of these two sherds were each equipped with tripod legs, probably for leg-ring bases, and line designs, probably in paneled bands.

OTHER DESIGNS. There are a number of sherds bearing designs similar in style to those discussed above, but which do not show enough to permit certain classification. The interior of the American Museum sherd (fig. 49, *11*) has an unusual rim band with vertical bars forming a horizontal "ladder" on the rim. Below, the design is obviously paneled and was probably contained in a band, but the nature of its arrangement is not clear. The right hand panel has a secondary framer in "ladder" style, another unusual feature, as is the cross-hatching in the zig-zag triangle panel at the left. A second unusual sherd from the American Museum (fig. 49, *19*, *20*) appears to have been paneled on the interior as well, again probably part of a six-panel band; the comb and horizontal "ladder," filling the left-hand panel, form a unique combination. The exterior of this sherd is also unique; it is not clear just how the panel design was laid out, and the cross-hatched triangle is very unusual. A further use of "ladder" and comb elements, plus hooks and probably "horn" double hooks (fig. 49, *21*) is again probably part of a paneled band design, but it is impossible to reconstruct its exact arrangement. The exterior (fig. 49, *22*) was probably decorated with a variation of the common six-panel opposed trapezoid band, with hatching, but this can only be a guess.

Fig. 49, *23*, *24* show a sherd of which the interior was obviously decorated with the six-panel, three large and three small, type of band. The outside, however, shows an unusual use of common elements. Heavy bands, inside framers and combs appear to have been combined in such a way that the whole design could narrow down vertically on either side of the short vertical heavy band. There is some indication that a leg had been applied to the bowl, but it is not absolutely certain. Very probably the small triangles containing combs were on either side of a hollow tripod leg. If this is so, here is a case of a paneled band over a leg instead of a break off, as in fig. 48, 7.

Fig. 49, *25* illustrates the exterior of a bowl sherd with a "pinched" rim (fig. 43, *2*), a rare feature on Red on White bowls. On the exterior spirals were placed in panels set off by a "ladder" triangle, probably forming a paneled band.

Fig. 49, *26*, *27* show the only bowl sherd in the Red on White series with an outcurved rim (fig. 43, *1*). It is too small to determine the design, but the exterior seems to have had a paneled design, from the evidence of the heavy bar starting diagonally, possibly similar to the six paneled opposed trapezoid type.

Fig. 49, *28–30* show the three single jar sherds of Red on White type. There is little to note about the designs employed in their decoration, excepting that there is evidence of banding, paneling and the use of the spiral (fig. 49, *30*) with a "ladder" to set it off.

Rim decoration appears to have been no more variable than on Red on Red ware. There are many examples of solidly painted rims, with broad bands covering the lip and extending down on both sides. This appears to have been the usual method of decoration. However, short lines were sometimes used (figs. 47, *12*; 49, *26*, *27*). Sherd examples of this are very rare.

Paint was applied to basal supports as well. The single Red on White annular base (fig. 44, *2*) was painted with a number of vertical, medium heavy lines.

Legs and basal coils of leg-ring bases were decorated in exactly the same manner as those of Red on Red type, that is, the conventionalized faces were painted (figs. 46, *2*; 48, *2*, *13*; 49, *2*) and the same blobs of paint applied to basal coils.

The single example of a hollow tripod leg (fig. 48, *7*, *9*) has a panel conformed to fit the shape of the leg, containing three horizontal lines at top and bottom.

This concludes the description of pottery material from the two excavated Carache sites with the exception of the single sherd (fig. 49, *31*) from the Mirinday sites combining features of Red on Red and Red on White. The white slipped area can be seen to be very small, and there is no means of telling how much farther it extended. The sherd is from a jar; possibly the three red lines, below the heavy red band, mark the lower border of a banded design. In this case the band and upper part of the vessel might have been slipped with white, leaving the lower part in natural red. At the extreme left-hand side part of another heavy band can be seen starting diagonally from the horizontal one. This must have been a panel division. The sherd is unique; there is no doubt that if such vessels had been at all common, many more fragments of them would have been found.

**Comparison of Red on Red and Red on White Design.** Red on Red and Red on White type wares share a number of features both of shape and of design, but there are marked differences between them. These similarities and differences are briefly discussed below.

The almost complete absence of jars from the Red on White series eliminates any comparison of jar designs between the two types. Actually, some Red on Red jar designs are not dissimilar to some of those to be found on Red on White bowl exteriors, spirals and simple geometric line-filled figures, such as triangles and trapezoids, being common to both. This likeness of simple elements in use on both types is, of course, a strong indication of relationship. Red on Red bowls show a number of band types which are never found on Red on White, especially narrow rim bands, such as the fourth or fifth types. Also, the "hourglass" band and the "chord-divided" bands are absent from Red on White design. Opposed triangles, used in a number of ways and in somewhat different styles, are common to both. The Red on White opposed triangles are apt to be small and often have "ticks" on their inner outlines, a feature absent on Red on Red sherds, but they are used in essentially the same way in each type. The same applies to triangles and trapezoids; there is a marked resemblance in the use of these opposed figures, especially when they are filled with simple hatching.

Spirals have been emphasized in the reconstruction drawings of the Red on Red type because many of the sherds which could be so used happened to have spiral decoration; there were none among Red on White sherds which lent themselves easily to such use. Actually, the use of spirals, often in exactly the same way, for example, with "ladders" to set them off, was common in both types.

Red on White design is characterized by a much greater use of paneling. Heavy bars were used more commonly to mark off true panels, and the design elements in use on bowl interiors are more likely to be found in the sherd collection definitely bounded by such heavy bars. Among Red on Red sherds, heavy bars are confined almost wholly to sherds which show "chord-division" bands, a type of band division which is not true paneling.

Elements of design commonly in use on Red on White bowls but seldom, if ever, found on Red on Red sherds, are the comb, the small spiral "hook," the "ticked" spiral hook, and the "horn" double hook. These are nearly always in association with the six-panel opposed trapezoid bowl exterior band, so common on Red on White bowls, lacking on Red on Red specimens.

On the whole, in spite of the apparent differences between the two types, their general similarity cannot be doubted. This is strengthened by the evidence of specific identities in leg-ring base modeling and painting and by numerous small instances of similarity in technique and the use of elements, which adds strongly to one's feeling that specimens of both types could easily have been made by the same potter. Certain traditional shapes and patterns were probably employed for each type, but differences in these are not strong enough to offset their obviously close relationship.

**Ceramic Material from the Cave of Santo Domingo.** None of the pottery from the Cave of Santo Domingo to be found in private collections or illustrated in the literature is characteristic of the Mirinday or Los Chaos sites. There are, it is true, only a few pieces definitely from the cave and several doubtful specimens. Two of the objects illustrated by Jahn and Briceño-Iragorry[3] are reproduced here. (Pl. XIII, *33*, *34*.) Both are now in the Briceño-Iragorry collection in Caracas. These pieces are certainly from the cave. The five vessels illustrated by Jahn in the upper section of his plate are also definite. The objects illustrated in pl. XIII, *35–39* were said to have come from the cave, but this was not certain. All are in the Briceño-Iragorry collection.

It is obvious that this is a small body of very specialized material, with no very specific resemblance to the usual run of Carache ware. The alligator effigy bowl (pl. XIII, *37*), of unslipped red ware, has no counterpart in the Plain Red type; this in itself is not conclusive evidence that the piece was not made at Carache at the time when Plain Red ware was being made at Mirinday and Los Chaos, but evidence of effigy vessels of this sort was conspicuously absent among the sherds. The double-headed zoömorphic bowl with four legs, decorated with incision, also in plain ware but darker in color (pl. XIII, *39*), is also unique. Such incised decoration is never found on any Carache sherds from the village sites, and elongated bowl shape is absent. The same applies to the bowl illustrated in pl. XIII, *34*. A similar bowl, mounted on four free legs, with the same type of head with hands on top of the head, was also said to have come from the cave and is now in a private collection in Barquisimeto. There is nothing about either of these two bowls which suggests the valley sites, either in body shape or modeling.

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[3] Jahn, 1927, pp. 320–321, and illustration on page preceding Appendix; Briceño-Iragorry, 1928, p. 180 and pl. 2.

Jahn illustrates two bowls similar to the specimen illustrated in pl. XIII, *36*. They suggest those of the valley sites in shape, excepting for the fact that they have somewhat more incurved rims. They are mounted on tripod leg-ring bases, but these are hollow throughout, both legs and rings. Jahn describes them as having holes in the legs, which he feels may have served for the egress of wax, over which they were modeled.[4] This appears unlikely. Modeling and incision are present on the specimen here illustrated; Jahn's specimens show a human face quite out of the Carache style in one case and a lizard in low relief on the other. Paint was applied but is badly obliterated. Whether there was a slip is uncertain; probably there was in the illustrated specimen. The design was a spiral motif, but resembles the spiral decoration from other parts of the Andes, described below. The two small jars, one of them on four feet (pl. XIII, *36*), and two similar ones illustrated by Jahn, but lacking feet, also do not seem to belong in the Carache pottery series. Their shapes, supports and decoration by incision are foreign to Carache. Jahn also illustrates, in the same group as the above, a tetrapod bowl with bulbous hollow legs. These rise above the level of the rim. It is very similar to a few bowls from the highland region of the State of Trujillo. Both have painted designs, badly obliterated, but in the spiral motif. Tetrapod vessels occur in other parts of the Andes, but there is no evidence for them at Carache; furthermore, the style of leg on this type of vessel apparently was never in use at Carache even on tripod bowls.

Pl. XIII, *38* shows a male figurine seated on a four-legged stool, hollow, with a large opening in the head, and decorated with spiral designs in dark red paint on an unslipped, polished, reddish clay. The paint is badly obliterated. No sherds of anything of this sort were found at the valley sites, but the same sort of figurine has been found in other parts of the Trujillo Andes.

It seems to me that in consideration of Carache pottery, the pieces just described had better be omitted. In the first place, some of them are of doubtful provenance; in the second, they are obviously very specialized and probably ceremonial pieces, with the exception of the small jars; thirdly, if there were any evidence in the cave that they were more closely associated with true Carache material, it is not known. The result is that there are two alternative hypotheses which one can adopt in connection with this material. One is that it was actually made by the Carache people of Mirinday and Los Chaos for ceremonial purposes and was placed in the cave, as Jahn suggests,[5] to hide it from the Spanish or for purely ceremonial reasons. This hypothesis must be adopted in the face of the absolute lack of any signs that such material was made in the valley sites, although this lack may be due to chance. The second alternative is that the material was placed in the cave by people of another Andean group, who fled to Carache at the time of the Conquest and hid this ceremonial pottery from the fanatical Spaniards. The affiliation of the ware with Andean areas other than Carache forces me to incline to this view.

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[4] Jahn, 1927, p. 321.

[5] Jahn, 1927, p. 320.

## *STONE*

Only a few worked stone specimens were found at the Carache sites. The material used was a slatey rock, common in the neighborhood. Pl. XIII, *31*, *32* show two curious thin "slate-pencil"-like objects, 8.5 and 10 cm. in length, roughly smoothed, with circular grooves at one end. One was found at each site. Their use is entirely problematical; rattled together they produce an agreeable, tinkling sound.

Pl. XIII, *29* is a broken pendant; it shows no evidence of careful work. This type of rock will not take a smooth polish. The hole was drilled from both sides. In shape it was probably a long oval. Possibly it had two holes for suspension, but it does not seem to have had the "bat" shape characteristic of many Andean stone broad-winged ornaments.

Of the stone slabs over burials only one was deeply worn, but not in true metate fashion.

## *BONE*

A single specimen of worked bone (pl. XIII, *30*) was found at the Mirinday site. It is a roughly circular piece of bone, 5 cm. in greatest diameter, pierced in the center. The edges of the amulet, if it can be so called, are worn smooth, as are the borders of the perforation. All surfaces give evidence of considerable polish, probably from use as personal adornment. After careful examination of the piece with the late Dr. Glover M. Allen of the Museum of Comparative Zoölogy, Harvard University, it was obvious that the interior relief and blood vessel grooving did not match cranial bones from any of the larger animals one might expect to find in Venezuela. Comparison with fragments of human crania indicated that the piece was very probably a part of the frontal bone from the lower right side. There is not enough of it to be perfectly certain, but the interior relief, blood vessel grooving, weight and texture of the bone make this almost a certainty.

## SUMMARY OF CARACHE SITES

From personal observation at the Carache sites, it was obvious that no stratigraphic evidence for more than a single period of occupation is to be found. This is clear both from conditions in the ground, which, if not ideal at Mirinday, show that the various pottery types existed contemporaneously, and from the material itself, which obviously forms a single complex. Burials were primary, direct, often slab-covered, with the possibility of small funeral fires having been made at Mirinday. No actual mortuary offerings of any kind were found with the burials. Spinden, who visited Carache in 1915, lists the town as one of the Venezuelan sites characterized by urn burial.[6] No urn burials were found by us at either site, nor had the natives of Carache ever encountered any, according to local report. From the concentration of material and its fragmentary nature, it may be inferred that fairly large groups inhabited both sites, probably not for a very long period and probably at some time immediately preceding the Spanish Conquest, since no European remains were found with the aboriginal material. The lack of floor or hearth remains is a reasonable consequence of the topographic condition of the Mirinday site, but at Los Chaos a really extensive series of excavations might uncover such remains in some of the less seriously eroded spots.

Mirinday and Los Chaos give representative samples of the dwelling refuse of the Carache people. The Cave of Santo Domingo may have contained their ceremonial objects or those of some other Andean group; at all events it was not a dwelling site.

On the basis of the sum total of archaeological information, leaving out the Santo Domingo evidence, it appears that there is ample justification for use of the term "phase" in connection with Carache. The word is employed here as at Lake Valencia, a convenient term to designate not a widespread "culture," but a group of demonstrably closely related elements representing the entire cultural re-

[6] Spinden, 1916, p. 326.

mains of a people, or as many as can be recovered. It is a term elastic enough to include similar manifestations of culture which may be found in the future. Thus "Carache Phase" may be used to designate the body of material left by the inhabitants of the Valley of Carache at the Mirinday and Los Chaos sites and any further remains of sufficiently similar nature which may be discovered in neighboring areas.

To date, the Carache Phase must be defined primarily on the basis of pottery. Wares of Plain Red type are found in six to one majority; Red on Red and Red on White types of painted ware, with the former somewhat more abundant, complete the ceramic components of the phase. These are closely related both in the ground and stylistically. Stone and bone work were not found in sufficient quantity to warrant their inclusion as significant elements. Burial, however, on the basis of the methods found to be in vogue at both sites, appears to have been direct and primary, although urn burial may have been practiced as well. House types and any other aspects of culture which can demonstrably be associated with the above elements may later be included as important features of the phase. Earlier or later horizons, then, if they are found in the same area, may be named without confusion on the same basis.

## TOPOGRAPHY AND ENVIRONMENT

SOUTH and west of the Distrito Carache, which represents the northeastern extension of the higher western Andes, Trujillo and Merida are dominated geographically by the main ranges of the Cordillera (fig. 1). According to Jahn,[1] the "alpine" *paramo* zone, ranging from 3000–4700 meters above sea level, is confined to Trujillo, Merida and Tachira. The Cordillera attains its highest elevations in Merida, in the peaks of the Sierra Nevada de Merida, one of which has an altitude of 5002 meters.

Throughout the central Andes the mountain ridges are paralleled by great valleys such as those of the Chama, on which the city of Merida is situated, and the Motatan, which rises on the eastern side of the range as it swings north into Trujillo. Both these streams eventually reach Lake Maracaibo, as do countless others on the northern slope. The *llano* drainage in Trujillo is chiefly carried by the Bocono and its tributaries, rising on the southeastern slopes as the main divide turns north. The Bocono flows into the Portugesa, which empties into the Apure just above San Fernando de Apure, and thus forms a part of the Orinoco drainage. The highest peak in Trujillo, La Teta de Niquitao, over 4000 meters high, is a part of the main divide between the Orinoco and Maracaibo watersheds, with true *paramos*, over 3000 meters, and many high sub-alpine *paramos* forming the divide just east of Carache, where it runs north and south, continuing southwestward into Merida and Tachira. On the north and south smaller ranges of foothills descend to the low-lying forests south of Lake Maracaibo and to the *llanos*. Paralleling the upper valleys of many tributary streams, such as the Momboy, an affluent of the Motatan, and many of the *llano* streams, south of the Sierra Nevada, there are high *paramos* not on the main divide. Thus the region is extremely broken with deep valleys and high ridges cutting it into a pattern of favorable living areas more or less isolated from each other.

In the lower valleys of the Andean region, as at Carache, maize is grown, but in the higher valleys, over 2000 meters, it is usually too cold and damp. Wheat is grown today in many of the upland valleys of the sub-alpine zone, while potatoes have been a staple since pre-Columbian times. On the actual *paramos*, bleak and wet with mean annual temperatures of only a little above freezing and practically no vegetation, living conditions must have been extremely hard.

## ARCHAEOLOGICAL SITES

My information in regard to Andean sites is all at second hand; very little is really known of the caves from which most of the material has come, and true village sites have never been found and excavated to my knowledge. The body of material described below was either noted in private or museum collections or in publications dealing with the area. The latter contain very little specific information, seldom locating illustrated specimens more closely than by state or district. The following is little more than a listing of areas from which material has come, with what information there is in regard to conditions under which some of it was found. The chief reason for lack of more detailed accounts of the finds is that practically all of them have been made fortuitously by country people in search of sheep or purposely hunting for specimens to be offered for sale. Thus, when a cave is found, it is looted, and a visit to it becomes practically useless, especially since the *paramos* are difficult of access and a long time is required to reach even those caves which are well known but completely ransacked. The sites discussed below are taken up as they occur geographically, from east to west, first in the highlands and then the few lowland sites which are known to exist in the Maracaibo Basin. The list is not exhaustive; there are undoubtedly a number of other places which have produced archaeological material. References in the literature are very short; there are no good descriptions of any of the cave sites and no records of excavation.

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[1] Jahn, 1934, p. 24.

The first area may roughly be taken to include the Distrito Bocono of the State of Trujillo (fig. 1). Most of the material from Trujillo in museum and private collections appears to have been found in the Bocono area. Nearly all this area lies in the *llano* or Orinoco drainage. Caves on the higher slopes of the Teta de Niquitao, the highest peak on the watershed between the *llano* and Maracaibo drainages, have produced a considerable quantity of material. The literature contains a number of references [2] to them, implying that they were used for burial, but there are no descriptions of any of them. There is certainly no evidence from the figurines, small tripod vessels and stone objects that the caves were used for habitation. They are commonly referred to as "santuarios." Similar material from Bocono may be found in the Museum of the American Indian, Heye Foundation. This is largely from near Las Mesitas, a small town on the Rio Burate, a tributary of the Bocono, south of the Teta de Niquitao. In Venezuela private collections contained pieces from the Laguna de Niquitao, which I cannot find on any of the available maps, and from the Paramo La Vegita, in the southern part of the Distrito Bocono. This locality also cannot be found on the maps. A number of specimens in collections are said to come from the Bocono area, and it is probable that a good many of those from unknown localities in Trujillo were also brought from this region. The amount of material known to have been found here is greater than from any other Andean district; an archaeological reconnaissance should repay the difficulties which would undoubtedly be encountered in carrying it out.

On the Maracaibo side of the watershed lies the Distrito Urdaneta. Briceño-Iragorry [3] has a small collection from Tuñame. There are several other pieces from the Paramo Tuñame in collections. The Tuñame area is in the southern part of the Urdaneta district; the Quebrada Tuñame, a tributary of the Motatan, is the only geographic feature bearing the name on the maps. Tuñame material, like most Andean collection specimens, appears to have been ceremonial. Jahn,[4] quoting J. I. Lares, says that on the Motatan, forming the boundary between the Urdaneta and Valera districts, the Kindoraes tribe dug artificial caves in the rock where the dead were placed with funeral furniture consisting of food and other offerings. In the Distrito Valera mortuary offerings or hidden caches of ceremonial objects have been found in caves on the *paramos* of the range west of the Rio Momboy. The Acuaje collection in La Puerta, on the Momboy, consists of material from the *paramos* Alto Cheque, Las Siete Lagunas and Piedras Blancas. These *paramos* are on the divide marking the boundary between the Valera and Escuque districts.

In the Distrito Escuque, apparently not far from the town of Escuque, just west of Valera, there is a cave called *La Cueva de los Muñecos.*[5] I have seen none of the figurines from which the cave takes its name.

Wassén [6] refers to excavations made by de Loys on the Paramo de Apartadero, in the State of Trujillo, which produced typical Andean small stone objects. This may be an error, since the well known Nudo de Apartaderos is actually in Merida, above Mucuchies on the upper Chama drainage.

In the State of Merida, the Timotes region on the upper Motatan drainage in the Distrito Miranda has produced a considerable amount of archaeological material, still presumably from cave sites of the *santurio* type. Several collections contain specimens from the Paramo Las Tapias and the Paramo Timotes.[7] South of Timotes, in the Distrito Rangel, high in the *llano* drainage, material has come from near the towns of Las Piedras [8] and Santo Domingo.[9]

Farther north, in the Distrito Torondoy, there are undoubtedly a number of sites which should yield material. Specimens in collections are somewhat rarer from here, and their exact provenance is not always certain. The Paramo Fraile, which cannot be located on a map, and the Las Tapias district in the Municipio Piñango have produced specimens. Other specimens from Torondoy are not located more closely.

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[2] Ernst, 1888, 1890, p. 174; Febres Cordero, 1920, p. 160; Jahn, 1927, p. 311; Briceño-Iragorry, 1928, p. 7.

[3] Briceño-Iragorry, 1928, p. 7.

[4] Jahn, 1927, p. 314.

[5] Briceño-Iragorry, 1928, p. 7.

[6] Wassén, 1934, pp. 342–343.

[7] Febres Cordero, 1920, p. 160.

[8] Briceño-Iragorry, 1928, p. 7.

[9] Febres Cordero, 1920, p. 160.

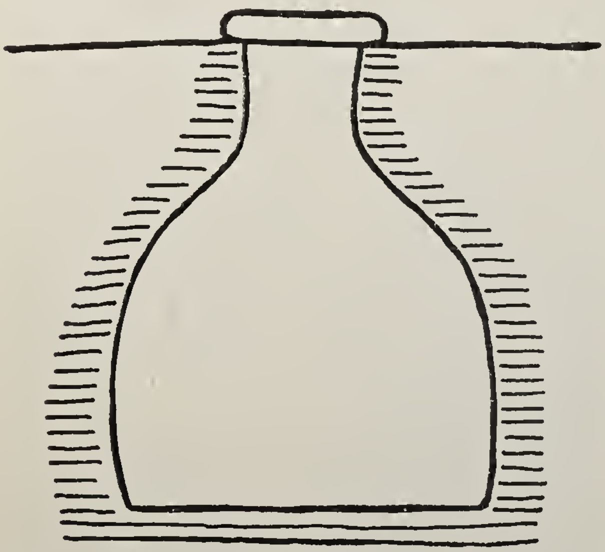

Fig. 50. Cross section of tomb at Mucuchies, Merida. (After Febres Cordero.)

From the upper Chama drainage, in the Distrito Rangel, there may be found a considerable quantity of collection material. Most of it is from the Paramo Mucuchies, the high mountain country between the head of the Chama and the town of Mucuchies. Caves containing figurines and food offerings have certainly been exploited in this region. In the Briceño-Gabaldon collection in Merida there are two large seed pods, open at the ends. One contained small pieces of plant fiber, bent and knotted, and a seed like that of a squash. These were found in a cave in association with small figurines of usual Andean types. Febres Cordero[10] also notes the discovery of figurines on the Paramo and has several in his collection in Merida.

There is some archaeological evidence that the town of Mucuchies itself was once occupied by the Indians. Jahn[11] states that the Mucuchies people made rock lined tombs, covered by a single slab. With the bodies of these tombs there were found cylindrical red quartzite beads. Febres Cordero[12] figures the cross section of a tomb, locally called a *mintoy*, which was discovered near the Plaza at Mucuchies in 1907. I have reproduced this drawing here (fig. 50). Apparently the bottle-shaped tomb was lined with rock and covered by a slab. No dimensions are given.

In the Distrito Libertador, which extends north and south from the State of Zamora to Lake Maracaibo, Febres Cordero reports several sites. *Mintoyes*[13] (tombs) have been found near El Morro, south of the city of Merida, and in the La Culata region north of Merida. Both are in the Chama drainage. Figurines and other burial offerings have also been found in the El Morro area[14] and at the Paramo Aricagua. The latter lies farther south, in the *llano* drainage.

Near the town of Aricagua, Dr. Febres Cordero found evidence of hill terracing,[15] presumably for agriculture. He describes the place as a vast stairway cut into a steep hillside. His diagrammatic cross section shows four terraces, each three or four *varas* wide (about 3 meters). The whole was covered with grass, but the stone retaining walls could be seen.

Jahn, again quoting J. I. Lares, says[16] that the Tiguinoes people made walls of dry-laid stone to retain earth terraces. He has seen remains of them near Acequias, in the Distrito Campo Elia. This area is in the hills southwest of Merida in the Chama drainage. Certainly the building of heavy stone walls is strong in the Andean tradition. Today the traveler on the Transandean highway from Valera to Merida sees hundreds of them; some actually serve as retaining walls for hillside fields.

Jahn illustrates[17] a desiccated body found near Pueblo Nuevo, also in the Distrito Campo Elia, southwest of Acequias. This he ascribes to the Isnumbies tribe. It was apparently seated with the knees drawn up tightly; in one hand there is a piece of string, but there appears to have been no clothing. In the Andes, dried bodies of this sort are said to have been found in caves; the discovery of an undisturbed cave containing them would be of great interest.

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[10] Febres Cordero, 1920, p. 160.

[11] Jahn, 1927, p. 314.

[12] Febres Cordero, 1920, figure, p. 73, and p. 151.

[13] Febres Cordero, 1920, p. 10.

[14] Febres Cordero, 1920, p. 160.

[15] Febres Cordero, 1920, p. 15, p. 47.

[16] Jahn, 1927, p. 318.

[17] Jahn, 1927, plate opposite p. 332.

The Distrito Sucre is the most westerly region from which I have seen material. This area lies in the great bend of the Rio Chama. Febres Cordero states that[18] *mintoyes* have been found near the Laguna de Urao, not far from Lagunillas. In his collection in Merida there are several crude figurines from the neighborhood of Chiguara.

This completes the list of fairly well known sites in the Andean area. I have seen no specimens from the State of Tachira, nor have I heard or read of sites, although there are undoubtedly a number in the highland regions.

Archaeological material from the lowlands of the Maracaibo Basin is very rare. Briceño-Iragorry has a single crude figurine in his collection from La Ceiba on the lake in Trujillo and several specimens from near Betijoque. These came from a cave called *La Cueva de los Tiestos*[19] (Cave of the Potsherds); it is situated near the town of Betijoque, not far from Lake Maracaibo, to the east. It is described as unworked and should produce remains of an interesting and apparently different phase of culture from that represented by the Falcon and other Trujillo specimens.

In the American Museum of Natural History there are several vessels from shallow urn burials found at Punta de Leiva, 9 kilometers east of Maracaibo, in the State of Zulia. This material was collected by Mrs. Helen K. Hodson, who noted that the urns contained bones which she thought represented fragmentary secondary burials. Smaller vessels were with the bones, within the larger urns. She also found traces of piles near the burials. It is evident from this and other reports[20] from Maracaibo that there is undoubtedly a rich archaeological field awaiting excavation along the shores of the lake as well as in the Andean area.

## CULTURAL REMAINS FROM WESTERN VENEZUELA (WITH THE EXCEPTION OF CARACHE), STATES OF LARA, TRUJILLO, MERIDA AND ZULIA

### *CERAMICS — VESSELS*

The pottery from the western area now under consideration is largely from the highlands. What few lowland pieces there are in collections are described in connection with the bulk of the material. It would be unsafe at the present time to do more than describe the available Andean material as a whole, since no definite sub-areal complexes can be defined as yet.

It should be pointed out again that nearly all western Venezuelan pottery in museums, private collections, and illustrated in the literature represents a very specialized body of material. Probably there are some pieces which were used in daily life, but I believe these to be rare. Certainly the conditions under which most of the finds were made point to the fact that we are dealing for the most part with mortuary offerings. It is also certain that no collection among those examined can be called fully representative of any site. This situation, combined with the obvious limitations imposed by the study of collection pieces, makes it impossible to present anything like a full analysis of pottery from the western area.

Classification should be based on surface treatment. Under present circumstances it is impossible to make fine distinctions. In the first place, it was not feasible to make fractures to ascertain the presence of slips and to observe pastes. In only a few cases in museums in the United States was a color standard employed. This makes it necessary to classify on the basis of the most obvious features. The first major division of wares may safely be made using the presence or absence of paint as a criterion. This forms two groups, unpainted and painted. The latter may be divided again on the basis of color and easily distinguishable slips. All the material may thus be divided in the same way as was the Lake Valencia and Carache pottery, but it must be kept in mind that classification for the western area is purely tentative. As soon as excavation yields a representative collection from an Andean dwelling site, it will be possible to define types more fully and to compute their relative frequency.

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[18] Febres Cordero, 1920, p. 10.

[19] Briceño-Iragorry, 1928, pp. 7, 12, 19; note 12.

[20] Breton, 1921.

In the primary division into wares, vessels and figurines are both included. The latter greatly outnumber the former, an expression of the unrepresentative character of the series. Therefore, figurines have been separately described in detail; actually they form a far more representative group than do vessels.

Wares which can be distinguished roughly by observation are as follows: (1) plain, unpainted and probably actually unslipped, (2) dark painted, probably for the most part on unslipped surfaces, (3) white on unslipped surfaces, (4) red painted on white slip, (5) black or dark brown painted on white slip, (6) black painted on orange slip, (7) black and red painted on white slip. Of the above, red on white ware is represented by three specimens, white on unslipped by one, and the black and red on white confined entirely to figurines.

In describing these wares I have followed a somewhat different course from that employed in dealing with definite types from excavated sites. Instead of discussing shape, basal supports, handles and decoration in order, the series has been divided into various classes of vessels, on the basis of shape and supports. This seemed more logical in view of the wide geographical range covered by the material and the variety of decoration employed. Furthermore, each class of vessel is confined almost exclusively to a single ware. Within a ware there may be found several classes, but each class is apt to be characteristic of one ware only.

**Plain Ware.** There are samples of plain ware from all four states under consideration, Lara, Trujillo, Merida and Zulia, with ten classes of specimens represented, including groups of vessels, pot-stands and pipes. Some of the groups are very small, but under the present circumstances the size of the samples has little to do with the relative importance of different vessel types. Colors vary from dark brown to buff and dirty grays. Decoration, often absent, consists chiefly of small applied elements, plain, pitted or split nodes and pellets, plain or modified strips and some modeling. Incision is rare, and true incised designs are absent.

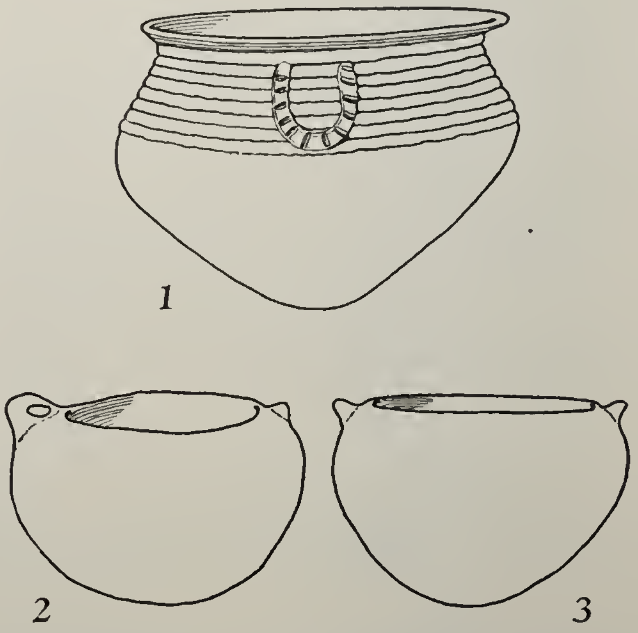

Fig. 51. Western plain ware simple jars: *1*, Punta de Leiva, Maracaibo, ½; *2*, *3*, Distrito Tocuyo, Lara, ca. ⅓.

Quadrangular Burial Urn.[21] Represented by a single piece (A M), a large burial urn from Punta de Leiva, near Maracaibo, of unusual quadrangular basin shape, dirty brownish buff in color, decorated in the corners at the rim with rough incisions. Long axis measures 50 cm., breadth 40 cm., height 30 cm.

Simple Jars. Nine of varying sizes and width of orifice. Six from the State of Lara, from the Distrito Tocuyo (pl. XIV, *1-3*) and Santa Ana, southeast of Quibor (pl. XIV, *4*). Two from Paramo La Vegita, Distrito Bocono, Trujillo (pl. XIV, *5*), one from Punta de Leiva (fig. 51, *1*), found in association with urn burials there. All but two have outcurved rims; the same number have or had simple handles. Corrugated neck band (fig. 51, *1*) made by leaving unsmoothed coils; each coil approximately .5 cm. in width. Interior completely smoothed. Horseshoe-shaped cross-incised strip applied over corrugated area on each side.

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[21] Abbreviations of museum and private collections used below:

A M, The American Museum of Natural History.

M A I, Museum of the American Indian, Heye Foundation.

F C, Febres Cordero collection, Merida.

B I, Briceño-Iragorry collection, Caracas.

Spouted Jars. Two of entirely different type. Jar with single spout on the side (fig. 52) from Distrito Tocuyo, Lara (A M). Protuberance on side opposite spout marks the attachment of a lug or handle. Bottom shows vessel was probably once mounted on an annular base. Stirrup-spouted globular vessel (pl. XIV, *6*), a unique occurrence of this form in Venezuela, found by Nectario María[22] at Cerro Manzano, just south of Barquisimeto, Lara. Spout modeled as a face, with coffee bean eyes, prominent nose, incised mouth and protruding ears. 25 cm. in height, a brownish buff in color.

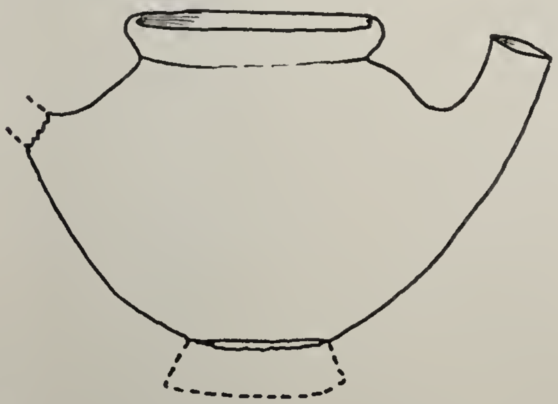

Fig. 52. Western plain ware spouted jar, Distrito Tocuyo, Lara, ¼.

Annular Base Jars. Large burial urn from Punta de Leiva nearly 50 cm. in height. Color a light brownish buff. Pl. XIV, 7 (F C), found on Paramo Mucuchies, represents a type apparently fairly common in the Mucuchies area, with several other examples of the same sort in Merida collections. Annular base similar to some of those found at Carache, with two "air-draught" holes. Decoration usually consists of two meandering appliqué strips, left plain, and two split nodes. Pl. XIV, *8* (F C) is a remarkable specimen from Paramo Las Tapias, Distrito Torondoy, Merida. Height 50 cm., annular base low. Neck constricted, with marked basal flange and outcurved rim. Two projections at sides, seen in profile, are complete modeled figures, with coffee bean eyes and pierced ear projections. The vessel bears two large similar faces. Large split nodes similar to notched lug handles used on Carache Plain Red jars.

Annular Base Bowls. One from Cerro Manzano, south of Barquisimeto (pl. XIV, *9*) markedly carinated with somewhat restricted orifice. Small low bowl (A M) with same slightly restricted orifice (pl. XIV, *10*), from Distrito Tocuyo. Pl. XIV, *11*, bowl from Paramo La Vegita, Bocono, Trujillo. Body profile concave, with well marked flare just above convex annular base. Decoration is modeled; conventionalized faces in low relief adorn each side. Pl. XIV, *12*, from the same place, a bowl with flaring rim and low annular base. Decoration consists of six slight triple incised and smoothed rim projections. Bowls (pl. XIV, *13-15*, F C) from Paramo Mucuchies. Type of pl. XIV, *13*, represented by three identical specimens. Body has slight carination, orifice somewhat restricted, flaring annular base perforated in four places. Two broadly pitted nodes flank a deep slit edged with punctate strips. This decoration occurs on one side only. Split lugs (pl. XIV, *15*) recall those of Carache and Torondoy jar (pl. XIV, *8*).

Large Tripod Jars. Two vessels; pl. XIV, *16*, 18 cm. high Distrito Tocuyo (A M), bears marks of large handles; lugs broken off. Pl. XIV, *17*, ordinary globular jar 15 cm. high, with outcurved rim from Paramo La Vegita, Distrito Bocono. Three solid heavy legs of uncertain length broken off. Much larger than most tripod vessels; could easily have been used for everyday purposes.

Small Tripod Vessels. Range in size from tiny miniatures not more than 3 by 3 cm. to largest, never more than 15 cm. in height and maximum diameter. Usual size about 10 cm. for height and 7 or 8 cm. for outside rim diameter of bowl-shaped vessels. There is a strong local belief in the Andean area that small tripod vessels were used as lamps or incense burners. None I have seen show any definite signs of such use, but they were undoubtedly placed in *mintoyes* and graves. Many were found in association with figurines in such places. This evidence, pointing to careful disposal, seems to indicate that they were made for ceremonial or funerary use. Briceño-Iragorry[23] calls them sacred lamps and says that many show signs of having been used to burn cacao butter; although I have seen no such signs, it may well be true. Febres Cordero[24] says that tripod vessels were used as lamps in places of worship, burning cacao butter on a fibre wick. They form the most numerous class of western vessels; the present study is based on notes and photographs of thirty-eight specimens from Lara, Trujillo and Merida. Their distribution appears to have been strictly Andean.

Two main groups, I with *solid legs* and II with *hollow legs*. Thirty-two of the former, eight of the latter among pieces noted.

I. solid leg tripod vessels. Five well marked types of solid leg group, based on treatment of legs and body shape, and three aberrant specimens which may well be representative of common types.

1. *Bifurcated upper leg extremity*, forming "ears" (pl. XV, *1-5*). Usual body shape small bowl with

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[22] Nectario María, 1933, section 3, fig. 2, no. 10.

[23] Briceño-Iragorry, 1929, p. 180.

[24] Febres Cordero, 1920, p. 4.

rolled, slightly outcurving rim and slightly restricted orifice. Legs usually set high on sides and well out from vessel. Pl. XV, *2, 4, 5*, from Paramo La Vegita, Distrito Bocono, pl. XV, *1, 3*, from Niquitao, same district, and Tuñame, Distrito Urdaneta, respectively. Similar specimens have been found in Distrito Valera, Trujillo, and near Timotes, Merida. Decoration on average specimen very simple. Short strips of clay applied vertically between legs (pl. XV, *1–4*), incision on legs (pl. XV, *1–4*), slight modeling of "ears" (pl. XV, *4*).

2. "*V*" *leg tripod bowl* (pl. XV, *6–11*), six specimens, three from Niquitao, Distrito Bocono (pl. XV, *6–8*), one of the same sort from Paramo La Vegita, same district. Pl. XV, *9–11*, from Tuñame, Distrito Urdaneta, Paramo Timotes, Distrito Rangel, Merida, and Cerro Manzano, south of Barquisimeto, Lara, respectively. "V" leg bifurcated in same way as "eared" type but attached to vessel wall in two places. Bowl shapes similar to those of "eared" leg group. Pieces from the Andes proper, decorated with heavily impressed wavy strips on the double legs and sometimes with incision at upper extremities. Pl. XV, *6, 8, 9* show same sort of short vertically applied strips set between legs as found on bowls of "eared" type.

3. *Single "ear"-like projection at the upper leg extremity.* (Pl. XV, *12–15*.) Four specimens. Body shape similar to that of two preceding groups. Pl. XV, *12*, from Tuñame, pl. XV, *13–15*, from Paramo La Vegita. Decoration lacking with the exception of crude bird heads modeled on leg projections of one bowl (pl. XV, *15*).

4. *Mask leg* (pl. XV, *16–18*). Three specimens. Body shape remains the same. Over each "V" leg a roughly triangular slab of clay was applied. This was fashioned into a sort of mask by the use of coffee bean elements for eyes and mouth and a vertically placed strip for the nose. Two Tuñame specimens (pl. XV, *17, 18*) have modeled bird heads on the two "ear" projections on each leg. A Paramo La Vegita piece (pl. XV, *16*) has simple incision on these projections.

5. *Incensario group.* Pieces from the Distrito Tocuyo, Lara (pl. XV, *19, 20*), La Quebrada,[25] Distrito Urdaneta (pl. XV, *21*), Paramo La Vegita (pl. XV, *22*), Tocuyo specimens identical to Carache *incensarios* of Plain Red type. They have double legs with some rough incision. La Vegita *incensario* very similar to Carache type, but legs are somewhat thicker. It has nodes at the top of each leg, pitted with eyes and incised mouth to form a face. La Quebrada piece is somewhat different in shape, falling between *incensario* and a true vessel type but has been included with *incensarios* on account of its very small size (outside rim diameter about 5 cm.). Each leg has a rough single projection, the only decorative features.

Three solid leg specimens cannot be placed in any of the above classes. (Pl. XV, *23, 24*, (M A I) from Las Mesitas and near Niquitao, Distrito Bocono, respectively. Las Mesitas bowl, 13 by 13 cm. in height and width has simple round solid legs; the almost straight sided deep bowl is unusual. Niquitao bowl, very slightly larger than the preceding one, has its legs set well underneath. Each has three modeled overlapping attached figures "climbing" the leg. Pl. XV, *25* illustrates the one specimen found at Zumbador, northwest of Barquisimeto, Lara. The legs were broken off but had obviously been solid. The shape of the vessel is that of a small jar; in this respect it is similar to Cerro Manzano hollow leg specimens, described below.

II. HOLLOW LEG TRIPOD VESSELS. Nectario María found three at Cerro Manzano, south of Barquisimeto, Lara (pl. XV, *26–28*), all small jars of varying shape; none stands more than 15 cm. in height. Legs are hollow but air space very small; no holes with the exception of the specimen illustrated in pl. XV, *27*, which has six incisions reaching the air space. Pl. XV, *29*, small tripod jar from Distrito Tocuyo, Lara (A M). Hollow legs have a wide slit. The only hollow leg specimen from outside Lara found among the various collections studied came from Paramo La Vegita, Distrito Bocono, (pl. XV, *30*); bowl shape is more like other true Andean tripod pieces than are Lara hollow leg specimens. Decoration confined to single hook-like projection at top of each leg.

LEG-RING BASE VESSELS. Seven (pl. XVI, *1–7*). Considerable variation, some bowls, others almost jars. Pl. XVI, *1*, from Santa Ana, Distrito Barquisimeto, Lara, with four low legs, total height 8 cm. Pl. XVI, *2*, from Cerro Manzano, 10 cm. in total height, also has four low legs or feet attaching small carinated jar to ring. Pl. XVI, *3, 4*, two small carinated bowls mounted on four low legs and rings, from Cerro Manzano and the Distrito Tocuyo (M A I), respectively. Each only 8 cm. in total height, each decorated in the same way. Pl. XVI, *5*, from Paramo La Vegita, Distrito Bocono. This again has four very low legs to the rim and is even smaller than preceding pieces, only 7 cm. in height. Pl. XVI, *6*, one of two similar small bowls from Distrito Tocuyo (A M), 9 cm. in maximum diameter, mounted on five low incurving legs which are attached to a ring much narrower in proportion to the diameter of the bowl than is usually the case. Pl. XVI, 7, also from Distrito Tocuyo (M A I), of the same size as the preceding, but arrangement of legs is quite different. A basal ring is attached to the bowl by means of three very low interior straight legs. Outside there are eleven extra curving supports from ring to vessel wall; these serve no purpose other than decoration. A similar specimen was found at Cerro Manzano.

POT-STANDS. This term has been used to designate the specimen illustrated in pl. XVI, *8*. There are two from Cerro Manzano; the illustrated figure has four applied frog figures, the other three. They are simply cylinders with flaring extremities, decorated with applied modeled and incised frog figures.

PIPES. Two plain ware elbow pipes were found at Cerro Manzano by Nectario María. Undecorated one (fig. 53, *1*), 12 cm. in length with large bowl and straight mouthpiece, has a slight basal flange. Decorated specimen (fig. 53, *2*, *3*) has a human face modeled and applied to the bowl, facing away from the smoker. Eyes and mouth are coffee bean elements, nose is prominent and has two punctations for nostrils; a small pellet was applied to each cheek. A horseshoe-shape applied strip frames the face.

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[25] Febres Cordero, 1920, p. 63.

**Plain, Probably Unslipped Ware with Dark Paint.** There are relatively few specimens of this ware to be found in collections from the western area. The eight pieces on which I have notes may be placed in four categories: (1) double-spouted jar, (2) tripod bowl, (3) leg-ring bowl, (4) tetrapod effigy bowl. Colors are light browns and buffs with dark brown and sometimes reddish paint. Some plastic as well as painted decoration was used.

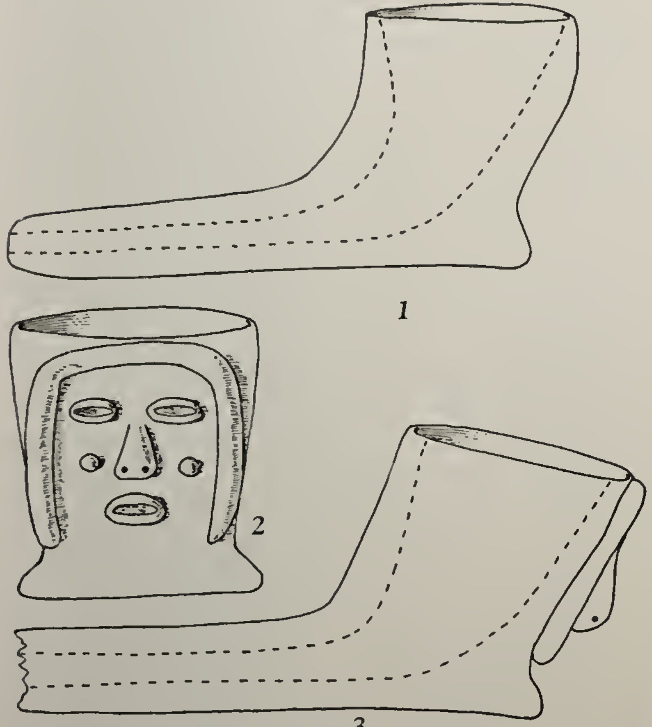

Fig. 53. Western plain ware pipes, Cerro Manzano, Lara; *2*, face of bowl of *3*.

Double-Spouted Jar. (Fig. 54, A M) from Punta de Leiva, found in an urn burial. Each spout has a face consisting of two pitted shoe button eyes, set in two loops made by a single applied strip. Painted design badly worn off. Body apparently had a band design of opposed triangles containing dots and spiral elements. Annular base had a band of opposed triangles, dots and diagonal lines.

Tripod Bowls. One specimen (pl. XVI, *9*) found near Santa Ana, Distrito Barquisimeto, Lara. Shallow bowl mounted on three hollow rattle-legs, with bird head projections. Painted design on exterior applied in three panels between legs (fig. 57, *2* shows one). Leg designs with spirals and "ticked" lines recall Carache design, as does panel painting. Bowl sherd from same place (fig. 57, *4*) has hatchured panel and rough opposition of triangles somewhat comparable to Carache design. Hollow rattle-leg from the Distrito Tocuyo probably part of a tripod vessel. (Fig. 57, *3*, A M). Design even more suggestive of Carache, with spiral hooks, comb elements and hatchured panels. Paint a very dark red, nearly black in places, on an unslipped light reddish buff surface, analogous to Carache Red on Red. Leg apparently had two horn-like projections at the top and was incised at the bottom as a foot. Just above the foot an encircling strip of clay was added.

Leg-Ring Bowls. (Pl. XVI, *10*, A M) from the Distrito Tocuyo, only faint signs of paint on legs and ring, not enough to trace design. Each of the four flat legs has a pronounced bulge, hollow on the inside. The curious single attachment on the rim is also hollow. Bowl from Tuñame, Distrito Urdaneta (fig. 55, *1*, *2*, B I). It is very much like a Carache piece both in shape and design. Legs lack modeled faces, but double-coil basal ring is a Carache feature. External design is the six-panel opposed trapezoid band so typical of Carache Red on White type ware, each panel containing a comb element. Interior design is in four panels set off by a double-line cross, with spirals in each, also a Carache feature.

Tetrapod Effigy Bowls. These specimens (pl. XVI, *11*, B I; *12* M A I) from the State of Trujillo, were, according to Briceño-Iragorry,[26] meant for carrying offerings. How he knows this definitely, he does not say. Both specimens have rattle-legs. At each end there is a pair of modeled animal heads, springing from a single hollow projection. Under the center bowl there is a hollow space, the wall of which is pierced in one case (pl. XVI, *12*) and has some external incision. Both intricately painted in dark brown on a lighter, brownish buff, well polished background. Spiral is the dominant decorative element. Large "S" spirals on legs (pl. XVI, *12*) and body (pl. XVI, *11*) are in the negative, but there is no suggestion that a lost color process was employed.

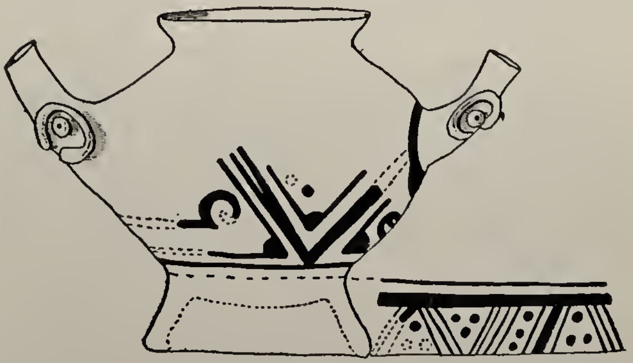

Fig. 54. Western dark on plain ware double-spouted jar, Punta de Leiva, Maracaibo, less than ½.

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[26] Briceño-Iragorry, 1929, p. 180, pl. I. Pl. XVI, *12* shows the same specimen.

**Plain Unslipped Ware with White Paint.** A single specimen of this ware from Niquitao, Distrito Bocono (pl. XVI, *13*, B I). A small tripod vessel, of the same size as those of plain ware, with solid legs, each with two pitted nodes at the upper extremity, and three white painted lines running the length of it. Between the legs are inverted chevrons done in white paint.

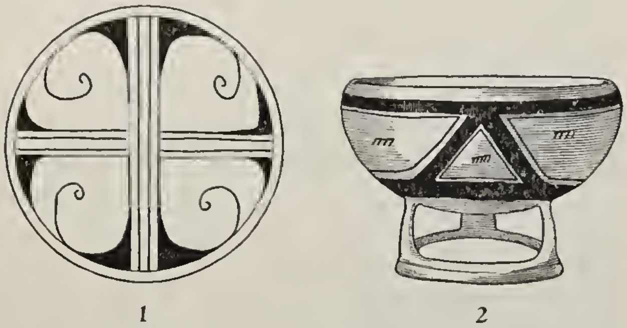

Fig. 55. Western dark on plain leg-ring base bowl, Tuñame, Distrito Urdaneta, Trujillo.

**Red on White Ware.** There are three specimens with red paint on a white slip comparable to Carache Red on White, each of a different vessel shape.

Small Tripod Vessel. (Pl. XVI, *14*) from Paramo La Vegita, Distrito Bocono, equipped with hollow "V" legs, a feature not to be found among known specimens of plain ware "V" leg tripod vessels. Each leg slit, once on each side. White slip covers only the upper parts of each leg and a small portion of the adjacent vessel walls. Red paint applied in rough lines over slip.

Leg-Ring Bowl. (Pl. XVI, *15*) from Distrito Bocono, Trujillo. Rim diameter 30 cm. Four primary straight legs to the basal ring and four additional supports from the ring to high on sides. Four patches of white slip above each short leg, painted carelessly with inverted chevrons. The rest of the bowl, including interior, was covered with the same red paint, really a heavy slip-like mixture of pigment. Modeled frog figures looking over the rim.

Annular Base Carinated Bowl. (Pl. XVI, *16*, A M) from Distrito Tocuyo. In color of slip and paint it is identical with many specimens of Carache Red on White type ware. At the base, the definite mark of attachment on an annular base; also marks on the rim and at height of carination on two sides indicating that originally bowl was equipped with two vertical loop handles. External design paneled bands, one encircling vessel below point of carination, delimited by heavy line just above annular base. Same system of three opposed triangles containing spirals repeated on other side. Separating the two main panels, under the handle attachment areas, there are two "ticked" horseshoe-shaped elements of the same type as seen in fig. 56; the design on upper interior almost identical to lower exterior band. Upper panels, again one on each side, enclosed between heavy rim line and the upper banding line of the lower band. Again there is an inner and thinner framing line, a typical Carache feature. Panels filled primarily by five solid triangles resting on a horizontal line.

**Black on White Slipped Ware.** This ware is fairly common in western collections. The Andean pieces exhibit a similarity of style which distinguishes it from the material from Betijoque, in the lowlands of the Maracaibo Basin. Some modeling was used in conjunction with painting as on other wares.

Jar Sherds. Three (B I) from the Cueva de los Tiestos, near Betijoque, Distrito Betijoque, Trujillo. Fig. 57, *6*, a fragment of a large outcurving rim jar, decorated with black paint over a heavy white slip. Grotesque face with sweeping horn-like headdress partially brought out by negative painting. Fig. 57, 7, from rim of a very large jar. Design is an intricate arrangement of spirals, irregular black filling elements and solid black areas containing black dotted white spaces. The snake head and body, applied in low relief, outlined by lines and decorated with dots. Small sherd (fig. 57, *8*) shows a number of curved and irregular design elements from the body of a jar.

Sherds Probably from Hollow Leg Tripod Bowls. Two fragments (fig. 57, *9*, *10*, B I) also from Cueva de los Tiestos, Betijoque. Probably, but not certainly, from tripod bowls. Legs are hollow, luted onto bowl sides. Painted decoration is in Betijoque style, especially characterized by use of solid black triangles and lunate elements from which lines were produced.

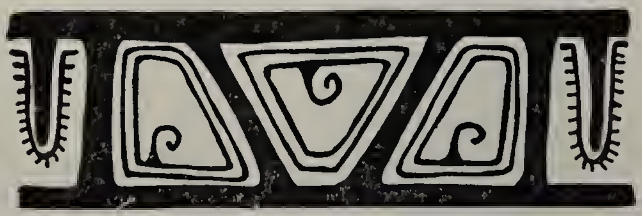

Fig. 56. Interior panel of western red on white bowl shown in pl. XVI, *16*, ca. ¼.

Annular Base Bowls. Five bowls with low annular bases noted in collections from the Andean region. Pl. XVI, *17* (B I)[27] from near La Quebrada, Distrito Urdaneta. Design a band containing horseshoe-shaped lines terminating in dots and some nearly

[27] Febres Cordero, 1920, p. 65.

closed curved lines with the same dots. Between groups of these elements there are solid black corner areas suggestive of the solid corner areas from which spirals spring on Carache wares. Annular base was decorated with a series of contiguous concentric arcs, but paint is badly obliterated. Pl. XVI, *18* from Paramo La Vegita, Distrito Bocono, represents a type of bowl of which I have noted two others: one from the same place; the third, the property of Dr. Rafael Requena, is of unknown provenance. Painted design on exterior consists of two bands and a series of elements on the base. Upper band has four lugs set at intervals, painted black, surrounded by black and white circles; these are flanked by black lunes, placed vertically. Between lugs opposed black elongated segments placed horizontally leave a white space, outlined by the lunes at the ends and by the segments above and below. The central band, on the bulging lower portion of the bowl, has four sets of vertically placed pairs of opposed segments. Each pair is split by a vertical line. These sets of elements are contained within light framing lines, in turn banded by heavy lines. On annular base there is a series of contiguous segments; in each depression between segments there is a short "tick" line reaching nearly to the base. On the interior of the rim is a thin line set just below the lip line. Below and tangent to it is a series of neatly circular, heavy dots. This interior design has also been noted on a similar Andean bowl in Dr. Rafael Requena's collection. Pl. XVI, *19*, small annular base bowl, from Paramo La Vegita, Distrito Bocono, decorated by a heavy solid band of black paint on the body. Basal band consists of three pairs of concentric arcs, the upper one of each pair tangent to an encircling line of the same thickness as the arcs. This small bowl type was sometimes made with a false bottom instead of an annular base. Within the space left between the actual base and the base of the superimposed bowl, pebbles were placed. I have no illustrations of vessels of this kind, nor do I know where they may have been found, but there are several from the Venezuelan Andes in small collections which I had no opportunity to note carefully.

Leg-Ring Base Bowls. Pl. XVI, *20* found at Cerro Manzano, south of Barquisimeto, Lara, by Nectario María. It has three flat legs and in general appearance is suggestive of a Carache tripod leg-ring base bowl. White slip and painted design nearly all obliterated. Traces show that there was probably a four paneled band encircling the exterior. Pl. XVI, *21*, B I, from Tuñame Distrito Urdaneta, also had three legs to ring. Each leg leaves the bowl well under the vessel but was actually applied all the way from the rim. The upper end of each forms a face, produced by modeling and painting. The eyes are deep punctations, the mouth a deeply pitted node. Three interleg spaces form panels set off by legs and heavy lines. Each panel has three divisions, the center one oval and the two flanking ones roughly rectangular. Elements used to fill these areas are typically Andean in the use of lunate forms, solid blobs to fill angles, the production of thin lines from heavy curvilinear lines and the use of reserve background space in the design. Pl. XVI, *22*, an eight-legged specimen from the Paramo La Vegita, Distrito Bocono. Short, solid legs are in pairs; badly obliterated painted design was apparently a system of nearly spiral elements and loops extending onto the legs. Pl. XVI, *23* from Paramo La Vegita, Distrito Bocono; three pairs of straight legs to basal ring and three inverted "Y"-shaped legs, an unusual feature. Thus, nine leg attachments to bowl, twelve to ring. Again painted design is badly obliterated. It consists of a band of four panels, set off by pairs of heavy vertical bars. Each panel contained an oval of light lines and heavy interior opposed spirals produced from lighter lines in typical Andean style. On the rim four conventionalized modeled frog adornos appear, two broken off, and the remaining two badly worn.

Tetrapod Bowls. Two hollow and rattle leg tetrapod bowls (pl. XVII, *1*, *2*, M A I) from the State of Trujillo, probably from the Andean area. Painted design in panels and spirals badly obliterated.

Tetrapod Effigy Bowl. (Pl. XVII, *3–5*), bowl from Paramo Tuñame, Distrito Urdaneta. Hollow rattle-legs. Vessel is a true animal effigy, having both a modeled head and a short projection on the rim at the opposite side to represent a tail. Painted design skillfully applied in panels to sides and legs. Style is typically Andean, with heavy lines produced to form light ones, solid spirals, heavy angle fillers, lunes and reserved white spaces.

False Bottom Bowl. (Pl. XVII, *6*, B I) from the Cueva de los Tiestos, Betijoque, Trujillo. Hollow space between bottom of bowl and bottom of whole piece. Three curious handles on the sides, each consisting of two round strips set close together at the lower attachment near the base and diverging at the rim. Painted design consists mainly of dots on the body of the vessel, cross strips on the handles.

**Black on Orange Slipped Ware.** One sherd (fig. 57, *5*, B I) from the Cueva de los Tiestos, Betijoque, is painted black on an orange-red slip. The slip is quite definite, easily seen by the naked eye. The design appears typical of Betijoque, with triangular solid areas produced to form very thin lines. It would be of great interest to ascertain whether this is a common ware in the Betijoque district.

**Black and Red on White Slipped Ware.** This ware is represented only by figurines, which are separately classified and described below.

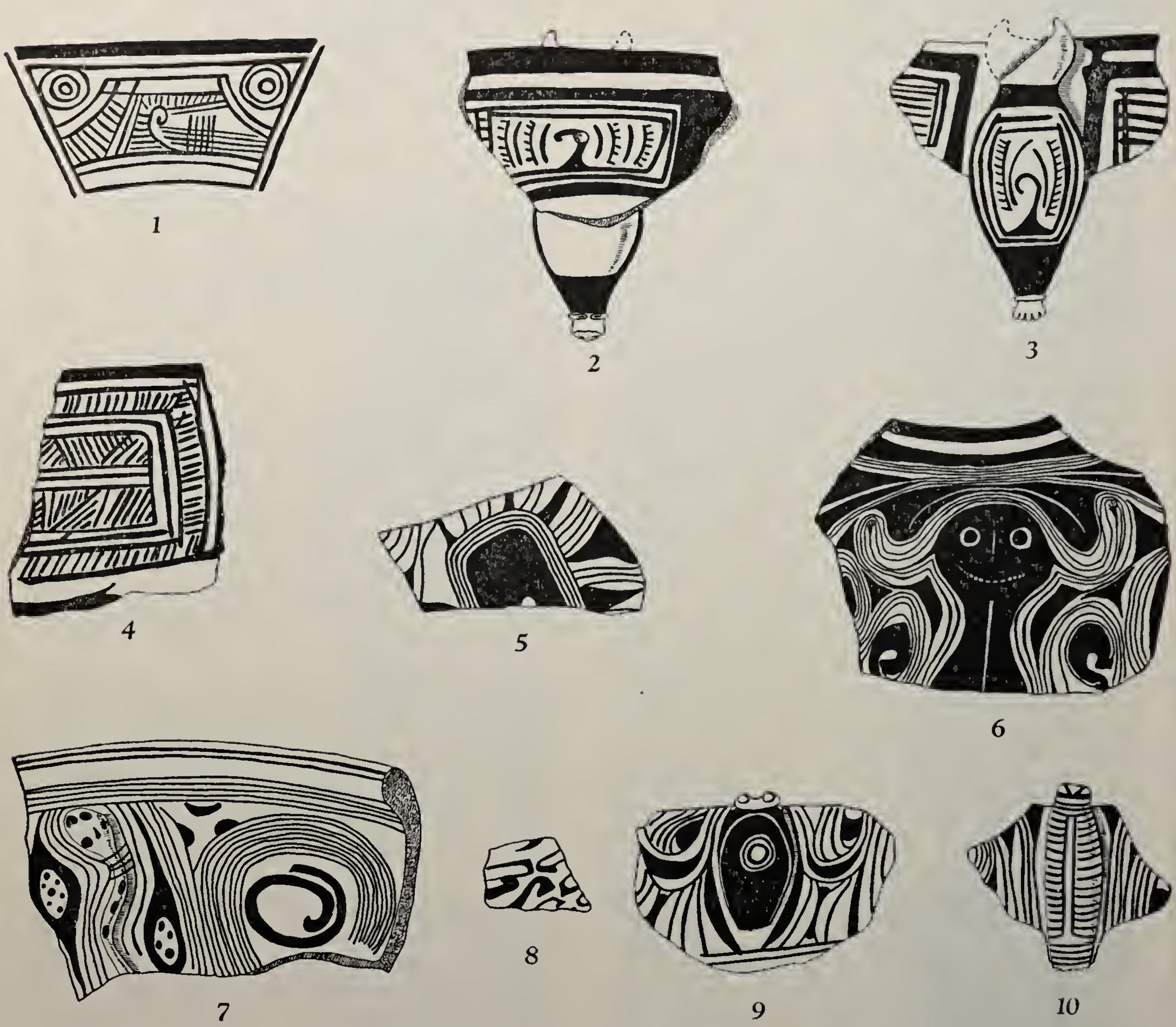

Fig. 57. *1–4*, western dark on plain ware: interior panel of tripod vessel, shown in pl. XVI, *9*; *3*, part of tripod bowl, Distrito Tocuyo, Lara (American Museum of Natural History); *4*, sherd from large vessel, Santa Ana, Lara; *5*, western black on orange ware sherd, Betijoque, Trujillo; *6–8*, western black on white ware jar sherds, Betijoque, Trujillo; *9*, *10*, western black on white ware, hollow leg sherds, probably from tripod bowls.

| | WARES | | | | |
|---|---|---|---|---|---|
| Classification | Plain | Dark on Unslipped | Black on White | Black & Red on White | Total Number of Figurines |
| FEMALE – Standing, total | (13) | .. | (16) | (10) | (39) |
| Plain quadrilateral head, solid body | 1 | .. | .. | .. | 1 |
| Plain quadrilateral head, hollow body | 8 | .. | 10 | .. | 18 |
| Corded quadrilateral head, hollow body | .. | .. | 3 | 10 | 13 |
| Oval head, hollow body | 3 | .. | 2 | .. | 5 |
| Crested head, hollow body | 1 | .. | 1 | .. | 2 |
| FEMALE – Sitting, total | (5) | .. | (4) | (9) | (18) |
| Plain quadrilateral head, hollow body | 3 | .. | 2 | 2 | 7 |
| Corded quadrilateral head, hollow body | .. | .. | 1 | 5 | 6 |
| Oval head, hollow body | 1 | .. | 1 | 2 | 4 |
| Crested head, hollow body | 1 | .. | .. | .. | 1 |
| MALE – Sitting on Stool, total | (7) | (1) | (7) | (4) | (19) |
| Plain quadrilateral head, hollow body | 1 | .. | 1 | 1 | 3 |
| Oval or Round head, hollow body | 4 | 1 | 5 | 0 | 10 |
| Crested head, hollow body | 2 | .. | 2 | 2 | 6 |
| MALE – Sitting without Stool, total | .. | .. | (2) | .. | (2) |
| Round head, hollow body | .. | .. | 1 | .. | 1 |
| Crested head, hollow body | .. | .. | 1 | .. | 1 |
| UNCERTAIN SEX – Standing, total | (15) | .. | .. | .. | (15) |
| Plain quadrilateral head, hollow body | 10 | .. | .. | .. | 10 |
| Oval head, solid body | 2 | .. | .. | .. | 2 |
| Oval head, hollow body | 2 | .. | .. | .. | 2 |
| Crested head, hollow body | 1 | .. | .. | .. | 1 |
| UNCERTAIN SEX – Sitting, total | (5) | (3) | .. | .. | (8) |
| Oval head, solid body | 2 | .. | .. | .. | 2 |
| Oval head, hollow body | 1 | 3 | .. | .. | 4 |
| Crested head, hollow body | 2 | .. | .. | .. | 2 |
| UNCERTAIN SEX – Miscellaneous, total | (2) | .. | .. | .. | (2) |
| TOTALS for each ware | (47) | (4) | (29) | (23) | (103) |

TABLE III

## *FIGURINES*

Pottery figurines are the most usual objects both in private and Museum collections from western Venezuela. Like vessels, most of them were collected in the highland area. Among the one hundred and three specimens noted, only three were from lowland Trujillo. The remaining one hundred were said to have been found in various places from near Barquisimeto, Lara, to as far west as Chiguara, Distrito Sucre, Merida.

No complete description of figurine types can be found in any of the literature dealing with the area, although there are a number of references to them.[28] The fact seems to have been well established locally that figurines were made for votive purposes. This has been attested by their occurrence in the so-called *santuarios* and in connection with the dead. Carache, well within the area where figurines might easily be found, yielded none from refuse deposits. Whether one might find a considerable number of figurine fragments in village sites pertaining to other Andean phases is as yet impossible to say. Although it has never been demonstrated by competent archaeologists, there seems to be little doubt that small tripod vessels, figurines and broad-winged stone ornaments together form some sort of votive complex. However, it may be recalled that at Carache the first, of *incensario* style, were relatively common, but no figurine remains were found with them. Until village sites and some of the graves and ceremonial localities in the Andes have been thoroughly examined, the exact nature of the association between these types of ceremonial objects must remain in doubt.

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[28] For the more important references to figurines, their finding places and theories concerning their use, see: Ernst, 1888, 1890; Spinden, 1916, p. 326; Febres Cordero, 1920, pp. 4, 11; Jahn, 1927, p. 321; Briceño-Iragorry, 1929, p. 179; Linné, 1937.

Classification of figurines is based upon attributes, rather than wares, as primary criteria. There are, firstly, two main groups: those representing females and those representing males. A third group is of uncertain sex; of this the majority were probably meant to represent females. Posture was chosen as the next most important criterion; each group was subdivided in this way into standing and sitting groups. The male group is made up exclusively of sitting figures, most of them on four-legged stools. Further subdivisions were based on head form and body structure, whether solid or hollow. Only a few are solid. This leaves the presence or absence of paint to the last. There are four wares represented: plain, dark painted on unslipped surface, black on dark brown on white and black and red on white. Dark painted on unslipped surface is very rare.

The above classification is shown in tabular form in table III. It may be noted that the total number of figurines listed is one hundred and three. This makes the total of any given main or sub-group represent nearly its frequency on a percentage basis in the whole series. In spite of the fact that there is no doubt that the figurine series as a whole is far more representative of western Venezuelan figurines in general than the vessel series was for western Venezuelan vessels, I do not believe that such percentages should be seriously taken to represent the true frequency of figurine types in the area. The series is probably a fairly good example of what might be found in the region as a result of excavation, but the material is from a very large area and has been more or less carefully selected. For this reason I do not feel that at present there is justification for more than a description of principal types with some indication of the apparent frequency of their occurrence and of their geographical distribution as far as it is now known.

Table III shows that certain types occur more frequently than do others within ware groupings. In some cases this is probably significant, in others it is probably not. The classification cross cuts wares and is justified in so doing since the definite and unmistakable important types, based on attributes, usually were made in more than one ware. The black and red on white ware, as noted above, was apparently used exclusively in the manufacture of figurines. In the following description the major types are more fully described than poorly represented types, although the latter may prove to be just as important as a result of future investigations.

**Female, Standing.** This is the most numerous group and would be more so if it could be shown that many of those which must be classified as of uncertain sex actually were intended to represent females. This seems probable but cannot be demonstrated.

Female standing figurines have been divided into five sub-types on the basis of head form and body structure (see table III). Of these, two are very important, easily recognized as Andean types and more numerous than any other sub-types in the entire series.

Plain Quadrilateral Head, Solid Body. The first two sub-types are characterized by plain quadrilateral heads, that is, angular heads, especially at the top, in contradistinction to oval heads. Even if these heads are joined to a body with no apparent neck, they are still quadrilateral if cut off by a straight line. By plain is meant without modeled additions to the top. One specimen, 5 cm. in height from somewhere in the Sierra de Merida, is solid (fig. 58, *1*). Unpainted, it represents a very simple type; there is hardly any indication of neck; arms are set off by simple perforations, legs differentiated from body by shallow incisions. Feet are represented by three vertical incisions. Eyes and mouth are horizontal punches; those marking the eyes were made in somewhat raised areas; the eye is thus a cross between a "coffee bean" and double punch eye. Like a coffee bean eye, it consists of a single punch across the raised area, but the punch itself is highly convex. This is a common feature of Andean figurines; some show that they were actually made by double punching and were then smoothed off between the two closely set impressions.

Plain Quadrilateral Head, Hollow Body. More numerous than any other single sub-type are the plain quadrilateral headed figurines with hollow bodies, occurring in both plain and black on white ware.

Hollow bodied figurines almost without exception contain pebbles to make them rattle. In size they vary from as little as 4 cm. in height to about 10 cm.; they are all small. Fig. 58, *2* shows a plain ware specimen from the Paramo Mucuchies. Head and legs are solid, but the body is hollow. Like all of these small figurines, it is simply modeled. The differentiation between head and body makes it a more life-like piece of work than many of the others, which look like the solid body specimen illustrated in fig. 58, *1*. Like the other specimens, it has a punched eye, in this case more obviously double punched. The nose is large and there are punctate nostrils. The ears are pierced, a common feature among less simple specimens. Painted specimens, with hatching on body and legs have also been noted.

Very small specimens are apt to have no neck; larger ones usually do. Smaller specimens as a rule do not have such pronounced modeled noses as large ones.

Indications of sex on these small figurines are usually confined to simple indications of breasts and by the merest indication of the genitalia. There is no such exaggeration of sexual features as occurs on larger specimens. Many very similar small specimens lack any indication, and, although probably meant to be female from their similarity to the types just discussed, they must be classified separately. In profile these figurines are thin, especially in the head, with the body and legs increasing in thickness. Heads are wide laterally, but thin antero-posteriorly, more so at the very top, increasingly thick in the face region.

Corded Quadrilateral Head, Hollow Body. The most easily recognized sub-type of female standing figurines is that characterized by quadrilateral heads, topped with plastic "corded" decoration (pl. XVII, 7–*12*). Most numerous of any sub-type, with the exception of the plain head groups preceding it, it is extraordinarily uniform in style and is typical of the Andean area. Figurines of this class are larger than the preceding, ranging from 12 to 21 cm. in height. They are all hollow and rattle. Sexual features are more apparent and sometimes exaggerated (pl. XVII, *12*).

In general appearance and shape they do not differ greatly from other types of standing figurines. Arms are never more than side projections separated from the body by a round perforation, although there is some modeling of shoulder and elbow. Bulbous legs are nearly all characterized by an encircling incised line. Feet are always concave at the bottom, a feature also common among other standing types. Breasts are generally indicated by punctations or punctate nodes.

Heads are the most characteristic feature. Viewed from the top they are not straight, so that the upper border is convex ventrally and concave dorsally. The "corded" top was apparently made by the application of a "cord" or "rope" of clay, made by twisting together two round strips. This is not certain, since I have never had the opportunity to examine a broken head. Another feature almost universal in this type, not found in the preceding, but common in others, is the combination of a hole and a notched projection at the back of the head (pl. XVII, *8*, *10*). The hole is always immediately in front of the base of the somewhat curved projection. It has been suggested that the combination would make an admirable plume holder, the butt of the plume or other ornament resting in the hole with the notch preventing it from slipping off to the side. However, there is no evidence of such use, and furthermore, plumes or sticks carrying ornaments could be firmly placed in the holes without the aid of a rest.

Facial modeling is similar to that of the plain head types; eyes are of the semi-double punch type; noses are variable in prominence and usually have nostril punctations below and apart from the actual modeled nose. Mouths were made in the same way as eyes in the more elaborate specimens. Outer edges are deeper, giving the impression of a smoothed over double punch. However, corners of heads are usually pierced in the ear region; pl. XVII, 7 shows a Peabody Museum specimen lacking much neck definition, so that the lower head corners could not well have been pierced. Instead it was equipped with modeled cross-incised rosettes, probably meant to represent ear plugs.

Painted design is variable. Pl. XVII, *11*, *12* show two Trujillo figurines painted in black on white. The paint has worn off badly in the case of pl. XVII, *12*. The other is quite typical, similar in design to many plain head specimens. Hatching covers the entire head and body. Pl. XVII, 7–*10* show specimens from Laguna Niquitao, Distrito Bocono, Trujillo and El Hatillo, in the mountains of the Tocuyo district, Lara. They are both done in the black and red on white ware, of which ten of the thirteen specimens of this type were made. The design (pl. XVII, 7, *8*) is very usual. The solid black triangle in the center is common on larger specimens. It is flanked by chevrons from the outer one of which go diagonal hatchured lines to the leg constriction line. Widely spaced cross-hatching on the lower legs is the usual decoration. It may be done over a white slip or a red slip-like paint (pl. XVII, *9*, *10*). The body design of this specimen is not unusual. There was no formal regularity in the application of the body hatching, and the negative spirals in the solid black rectangles on the thighs, both front and back, are not uncommon. Sometimes the same motif of opposed spirals, on front and back of each side, was done in curvilinear rather than angular lines.

The heads of both of these large figurines are painted in the usual style associated with the black and red on white ware. Eyes and mouth are solid black. Three or four horizontal stripes cross the face, often red outlined in black. The two heavy red stripes shown in pl. XVII, 7 have black dashes in two parallel rows. Between the horizontal stripes alternating groups of diagonal hatchured lines are found. From the middle of each eye two red stripes were painted, one above and one below, extending diagonally towards the four corners of the head but terminating on the nearest horizontal stripe. This use of red diagonals from the eyes is, of course, confined to figurines of black and red on white ware and was found on every specimen of the ware noted.

The backs of heads (pl. XVII, *8*, *10*) are uniformly decorated with "X's," each formed by crossing two sets of three lines each.

Oval Head, Hollow Body. Oval appears to have been a somewhat rare head form. The two specimens illustrated in fig. 58, *3*, *4* are from the Paramo Alto Cheque, Distrito Valera, Trujillo. They are both in plain ware; a single black on white specimen, badly worn, was noted to have come from Niquitao. Both the specimens illustrated are hollow bodied and rattle. They are crudely made and have been battered considerably as well. They lack leg constricting lines and "plume holders"; otherwise, they are similar in appearance to quadrilateral head types of small size, excepting for their oval head shape.

Crested Head, Hollow Body. Never very common, but nevertheless a definite type, the crested head was found only on two specimens of the female standing group (pl. XVII, *13*; fig. 58, *5*). Heads are characterized by high modeled projections set on the back but very apparent from the front. In both specimens there is a hole in front of this projection. In body shape there is little difference between these and other standing specimens. Both rattle and both have leg constricting incision. A plain ware figurine (pl. XVII, *13*), from Paramo Mucuchies, has a very prominent nose and eyes, the latter of the semi-double punch type. Definite ear plugs are present. A painted specimen of unknown Andean provenance (fig. 58, *5* M A I) is very similar but has pierced ears instead of ear plugs. Encircling the hips is an applied punctate strip with another down the back meeting it. This is a feature to be found very commonly on male figurines but unique among the female types studied.

**Female, Sitting.** The female sitting figurine group forms a very definite and easily recognized type, even though not very numerous in collections. It may be divided into four sub-types on the basis of head form. All specimens noted had hollow rattle bodies.

Plain Quadrilateral Head. The plain quadrilateral head sub-type has heads exactly similar to standing figurines of the same category. Female sitting figurines are almost all characterized by the same posture (pl. XVII, *14–17*). Legs are short, stick out at right angles to the body and are spread widely. Sex is plainly marked. Arms with characteristic shoulder projections extend to the ends of the legs, with hands where the feet should be. Feet, however, are not indicated. Fingers are marked by incision. This is the usual posture of all sitting female figurines, regardless of head form. One crude specimen from Trujillo has arms as they are in the standing types, simple perforated projections at the side. Another has the hands on the breasts rather than on the feet. These two are the only aberrant specimens among the total studied.

The plain quadrilateral head sub-type in black and red on white ware is illustrated in pl. XVII, *14*. Plain and black on white ware specimens are identical excepting for painted design. In modeling the head is of usual type as far as eyes, nose, mouth and ear perforations are concerned. The breasts, punctations on slightly raised surfaces, are usual.

"Corded" Head. "Corded" head specimens (pl. XVII, *15*, *16* show two from El Hatillo, Lara, M A I), are almost identical, excepting for the transverse "cord" decoration on top of the head. This again is a feature exactly similar to that found on standing types. Only one of six "corded" head specimens is of black on white ware; the remaining five are of the black and red on white ware. The single black on white ware example is from the Cueva de los Tiestos, Betijoque, Trujillo, and is decorated in a curvilinear pattern of five lines, solid triangular elements and white reserve spaces. This style is typical of the few Betijoque sherds to be found in the Briceño-Iragorry collection. In both morphology and posture, this figurine is similar to those from the Andes.

In painted design there is a marked similarity between the plain and "corded" head painted figurines from the Andean area. The three specimens shown in pl. XVII, *14–16* are all characterized by cross stripes on the chest. These are duplicated on the back. White slip was applied to the front of the heads, but the bodies were left unslipped. The cross stripes were done in the same white slip paint, sometimes outlined in black, as in pl. XVII, *15*, and filled with black dashes or dots. Arm bands at the elbows occur in several specimens (pl. XVII, *14*). Red paint was used on the faces in horizontal stripes and diagonal stripes from the eyes in the same way as in standing figurines of the same ware. Black alternating hatchured lines form the bulk of face decoration, again exactly as in the standing type. The Andean black on white ware specimen was completely slipped and painted with chest and back cross stripes, consisting of "ladders" as well as with arm stripes and chevrons filling the angles made by the chest and back "X" stripes.

Although most specimens show a hole at the back of the head, only one plain ware specimen and the Andean black on white ware sitting figurine were equipped with a notched projection in connection with the hole. The "plume holder" feature appears, then, to have been rare among seated figurines in contrast to its almost universal occurrence on "corded" head standing types.

Oval Head. Of the four specimens of seated oval headed female figurines, one is of plain ware (pl. XVII, *17*), one of black on white ware and two of the black and red on white ware. All have hollow rattle bodies, and all are seated with hands on feet in the same posture as those of the preceding sub-type. The only unusual feature of the plain ware specimen illustrated is the prominent pitted navel. The black on white specimen is from Betijoque and is decorated in typical Betijoque style. It has, however, the "X" cross stripes on front and back which are found on the Andean painted specimens. The two black and red on white ware Andean specimens are almost identical in shape to those of plain and "corded" quadrilateral head type, excepting for their oval heads. Painted design is the same for both types.

Crested Head. The single female sitting figurine with crested head (F C) came from the Sierra de Merida. It is of plain ware, badly worn and broken, differing in no way from preceding specimens excepting for the head, which is similar to that shown in fig. 58, *5*.

**Male, Seated on Stool.** Male figurines from the western area are all from the Andean regions of Trujillo and Merida. They are all seated, and with two exceptions among the collection material studied they are, or were at one time, seated on stools (pl. XVII, *18–20*, *24–29*). In every case where the stool was noted it was found to be low and four-legged. There is no reason to believe that other types were used in the few cases where the stool had been broken off. The usual posture of the figure on this seat is that in which the knees are bent to form a right angle, with the feet on the ground. In some cases the feet rest on the edge of the stool. Arms are generally partly bent, forearms rest on a projection from the knees, and one or both hands usually holds a small bowl. Sex is always plainly apparent; the erect penis and testicles were modeled and applied. Their size and prominence varies.

In height male figurines vary from 15 to over 30 cm.; they are larger, as a rule, than the female specimens.

Bodies are all hollow and most of them contain rattling pebbles. Legs and arms are usually solid, but legs may be hollow for part of their length.

A feature common to all specimens which conform to the usual type, that is, with feet on the ground and arms on knee projections, is the presence of a belt around the waist or low over the hips. This consists of a strip of clay and may be marked with punctations. In combination with the belt there is always another attached strip, more often punctate, perpendicular to it on the back, extending upward to the base of the neck. This sums up the important features of this very distinct type of figurine with the exception of head form and painted design. Head form is not of great importance. All but two specimens have oval or round heads, some of them crested. All figurine wares are represented with many of plain ware.

The male type forms an important and easily recognized group; although not as numerous as the standing female type, it appears to have been almost as much so as the seated female type. However, as I have noted above, the relative number of specimens listed in table III cannot be taken as a reliable indication of frequency.

Plain Quadrilateral Head. There are only three examples of this type of figurine, in plain, black on white and black and red on white ware. None are illustrated. Heads are similar to those of female types without "corded" decoration. Bodily characteristics are exactly as described above with the exception of one specimen (M A I) illustrated by Ernst.[29] In this example the legs are drawn up close to the body, and the feet rest on the stool. The coffee bean eyes are set nearly vertically, an unusual feature. Painted design on the black and red on white ware specimen is similar to that of standing female "corded" head examples.

Oval or Round Head. Ten of the nineteen seated male specimens are included in this division. Two of plain ware, from Trujillo, are almost identical, excepting for differences in modeling. One (pl. XVII, *18*, B I) is simply finished; the ears are marked with punctations but are not pierced. Toes are indicated by incisions; otherwise, there are no additions to the figure excepting for the usual belt and back strip. Pl. XVII, *19* (B I) shows a more elaborate head with heavy modeled and attached eyebrows meeting over a grotesquely large nose. The ears are adorned with large plugs. In this case the hands are incised, the feet plain.

The only specimen in dark painted or unslipped ware is that said to be from the cave of Santo Domingo, near Carache (pl. XIII, *38*, B I). This is an unusual specimen; it does not conform to the usual type since the arms are clasped to the chest and the hands hold no bowl. Aside from this the entire piece is better made than usual and was painted with spiral designs, now badly worn off. Altogether it cannot be considered very similar to the other oval or round headed specimens, excepting for the fact that it is definitely male and is seated upon a stool.

Pl. XVII, *21–23* illustrate another figurine of unusual type. It was found on the Paramo Tuñame, Distrito Undaneta, Trujillo, in association with the animal effigy bowl described above and illustrated in pl. XVII, *3*, *4*, *5*. The broad, thick body and thin arms and legs are in contrast to the thinner bodies and relatively heavier arms and legs of most male figurines. Belt and vertical back strip are absent. The feet rest on the edge of the stool, and the right elbow rests directly on the right knee, instead of on a projection from it. The usual bowl is not held in the hands but lies in the crook of the left elbow. Painted design is very similar to that on the effigy bowl from the same place; it is not applied in the way usually to be found on figurines, that is, primarily in straight, hatchured lines in a definite pattern which is common in many cases to both male standing and sitting types. Instead, this design definitely suggests the few examples of Andean black on white painted vessels (pl. XVI, *17–23*; XVII, *3–5*). The remaining four black on white painted specimens of the oval head subtype are similar in design to the specimen illustrated in pl. XVII, *11*. All of the specimens are badly worn, so that the cross-hatching and alternate diagonal line designs are sometimes almost entirely obliterated. Pl. XVII, *20* shows a badly broken example; the stool is gone and the left arm is broken, but part of the bowl held in the hands remains. Body design is in rough cross-hatching; the face has the usual horizontal stripes at mouth and eye level with diagonal lines between. The arms are ringed around with black stripes.

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[29] Ernst, 1890, pl. 13, no. 19.

Crested Head. Crested heads are generally roughly round, excepting for crests and other projections which characterize them. Pl. XVII, *28–30* show two Trujillo specimens in plain ware. Bodies and postures do not differ from preceding examples. The heads are carefully modeled with pronounced chins, eyebrows and noses. Eyes are of coffee bean type. The mouth in pl. XVII, *28* is a simple slit, but that in pl. XVII, *30* is a depression containing two rows of modeled teeth. Ear-plugs are large and prominent; over them there are higher ear-like projections which are characteristic of most of the crested heads. Crests are at the back of the head, broad transverse notched projections, with holes in front of them.

Pl. XVII, *31*, *32* (F C) show a Paramo Aricagua, Distrito Campo Elias, specimen. In all respects it is typical of the seated male type with the exception of the chin and head crest. The elongated chin is unique, as is the crest, a solid projection around which has been coiled a long thin strip of clay. Painted design in careless cross-hatching is perfectly usual.

The broken specimen illustrated in pl. XVII, *24* is one of the most grotesque and exaggeratedly male pieces noted. It is characterized by huge ear-plugs, very high upper ear projections, prominent teeth and a low crest. Black on white painted design is badly obliterated.

Pl. XVII, *25–27* (M A I), from El Hatillo, Distrito Tocuyo, Lara, is somewhat different. Lower legs and feet have been broken off. The back lacks the typical vertical applied strip, although a heavy belt is present. A thin round crest which presumably was visible from the front has also been broken off. Painted design in black and red on white is reminiscent of female types in the same ware, especially in the spirals on the buttocks and the facial painting. There are no red horizontal face stripes, but diagonal red stripes from the eyes are very apparent. The mouth, with its modeled teeth, is a feature found only in male specimens, however.

**Male, Sitting without Stool.** Only two such specimens were seen among the collections studied. Both have hollow bodies.

Round Head. Pl. XVII, *33* is from an unknown locality in the State of Lara. It is said to have been characterized by a modeled erect penis. Posture and body shape are not in keeping with those of preceding types, nor is the black on white painted design. The body and legs are hollow, arms are short, and the hands rest on the stomach. Eyes are of coffee bean style, the nose is prominent and the mouth is a broad depression with an applied strip on the upper and lower borders. Mouth, nose and the lower part of each eye are covered by a black painted mask. From each eye there depend three stripes, giving the impression of weeping eyes. On the chest there is a shield-shaded panel divided into four small triangular panels. These contain "ticks" and comb elements, suggestive of Carache design. Arms, legs and back are painted with plain heavy stripes, running the length of the limbs and up the back.

Crested Head. The only definitely Andean seated male figure not on a stool is from the Paramo La Vegita, Distrito Bocono, Trujillo. Excepting for its sex, it is almost exactly the same as the usual seated female figurine type with hands on outstretched leg extremities. Painted design is in black on white cross-hatching, typical of both sex groups.

**Uncertain Sex, Standing.** Table III shows that fifteen figurines of uncertain sex were noted. It is probable that most of them were meant to be females, since they resemble the female standing type in many ways.

Plain Quadrilateral Head, Hollow Body. Fig. 58, *6*, 7 shows two Paramo La Vegita specimens. They are very small, standing only 6 cm. in height. They have small hollow interior spaces, containing pebbles, although the heads are solid. They were apparently made in fairly large quantities, since ten of the fifteen quadrilateral head specimens are identical to one or other of the two types illustrated. Actually, there are two or three more of the wide headed type with arm projections (fig. 58, 7) than there are of the simpler type (fig. 58, *6*). Both are simply modeled, with large semi-double punch eyes, no noses, slit mouths and incised feet.

Oval Head, Solid Body. Fig. 58, *8* illustrates a small, solid body figurine from Paramo Mucuchies. It is similar to the small female types with oval heads.

Oval Head, Hollow Body. Fig. 58, *9* shows a hollow bodied specimen from Paramo Las Siete Lagunas, Distrito Valera, Trujillo. It is unusual in having modeled arms with hands clasped in front, rather than mere pierced projections at the side.

Crested Head, Hollow Body. Pl. XVIII, *6* shows an extraordinary figurine from the State of Trujillo, said to have been found in the mountains not far from Valera. It is quite different from any of the preceding male, female or indeterminate types. The body is hollow, but the interior space is small. Arms are broken so that one cannot tell how they were arranged. The face has some features in common with male types, for example the mouth showing teeth, although they are indicated by punctation rather than modeling. Eyes are of ordinary coffee bean

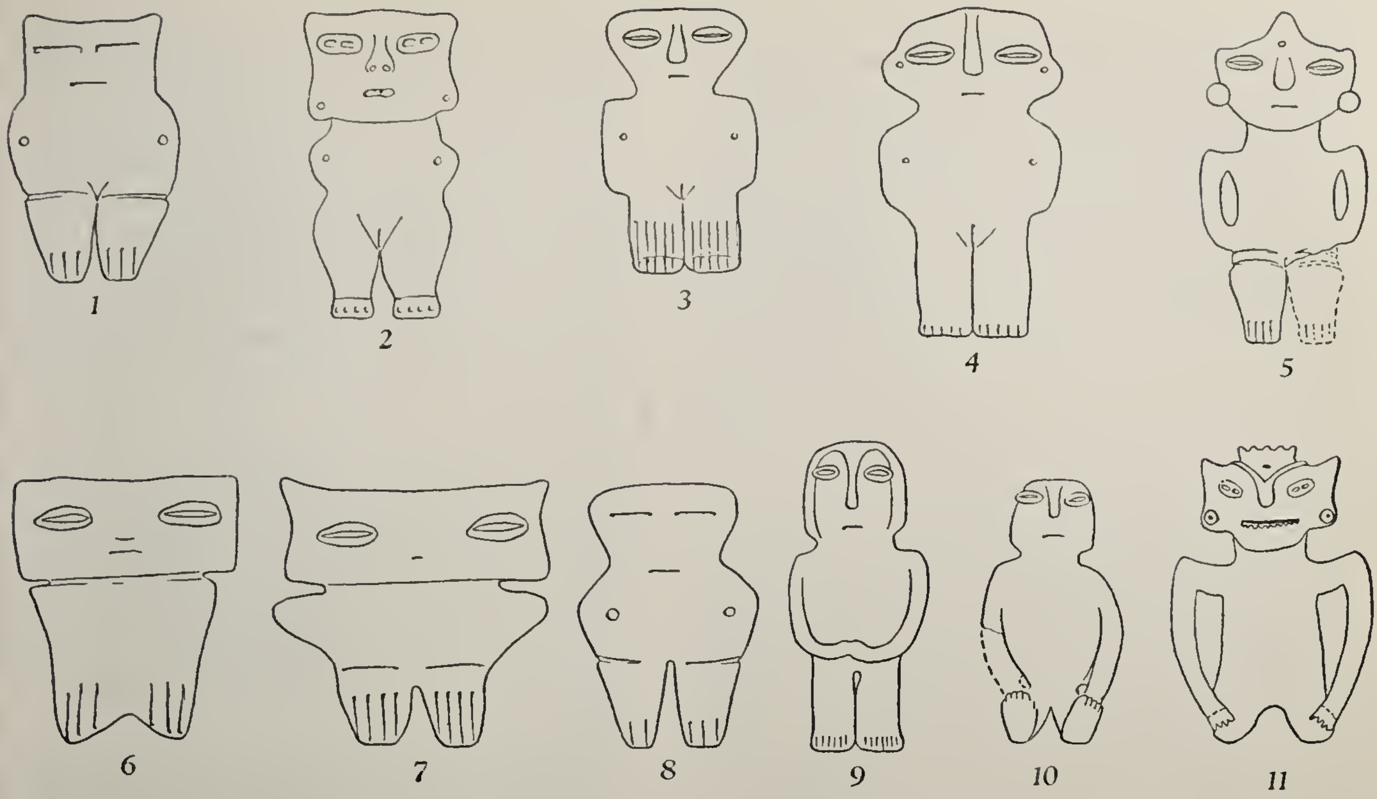

Fig. 58. Western plain ware figurines: *1*, female, standing, quadrilateral head, solid, Sierro de Merida; *2*, female, standing, quadrilateral head, hollow, Paramo Mucuchies, Merida; *3*, *4*, female, standing, oval head, Distrito Valera, Trujillo; *5*, female, standing, crested head, Paramo Mucuchies, Merida; *6–9*, uncertain sex, standing: *6*, 7, Distrito Bocono, Trujillo; *8*, solid body, Paramo Mucuchies, Merida; *9*, Distrito Valera, Trujillo. *10*, *11*, uncertain sex, sitting, Distrito Valera, Trujillo.

style but are set nearer the vertical than is usual. The huge nose and ears differ from the usual male types. The high three-branched crest, set just above the nose, is completely without analogy among the usual Andean examples.

**Uncertain Sex, Sitting.** There are eight specimens in this group. Some are probably meant to be female, one or two may have been intended as males.

Oval Head, Solid Body. Pl. XVIII, *1* (F C) illustrates two crude, solid body specimens from Chiguara, Distrito Sucre, Merida. Although broken, it is certain that they were seated. It is not surprising that they differ from the usual Andean types, since they are the westernmost figurine examples noted. The most striking point in regard to their modeled structure is the fact that they have heavily pitted, round shoe button eyes, instead of the coffee bean or double punch types. Aside from this, they do not differ greatly from some of the cruder Andean specimens from farther east.

Oval Head, Hollow Body. A crude specimen (fig. 58, *10*), from the Paramo Alto Cheque, Distrito Valera, Trujillo, has legs rather close together, otherwise no unusual features. Pl. XVIII, *2* (M A I) is probably Andean, although said to have come from Maracaibo. It is painted, dark on unslipped and exhibits the usual posture of the seated female type.

Pl. XVIII, *3*, *4* (M A I), from the State of Trujillo, is the best example of figurine manufacture and painting I have seen from Venezuela. It probably represents a male, although this is by no means certain. Entirely hollow, there is a large hole in the top of the head which can be seen from the rear. The figure is apparently smoking a cigar, which is held in the right hand. The outstretched left hand rests on the knee, and the upturned fist is holding something, apparently another cigar. Throughout, the modeling was done carefully and skillfully. The surface is well smoothed and polished. Paint is applied without a slip. It is nearly black, the background a light brown. The design itself is somewhat similar to some other unusual Andean specimens, notably a cave of Santo Domingo specimen (pl. XIII, *38*) and tetrapod effigy vessels illustrated in pl. XVI, *11*, *12*. The body was divided into spaces; the patterns were applied to fit them. One of the most apparent features is the continual production of negative "S" spirals within the pattern of the intricate painted design. Although much of it has been worn off, the greater part can still be seen. The predominant motive is the production of small spirals from solidly painted curvilinear areas; these are made even more effective by leaving thin negative spaces.

Crested Head, Hollow Body. The sitting figurine illustrated in fig. 58, *11* has a crested head similar to the few of usual type found both on male and female specimens. In posture it conforms to the usual sitting type, common for females, very rare for males. Pl. XVIII, *5*, on the other hand, is a unique specimen. It is from an unknown locality in the State of Lara, probably from near Barquisimeto. It has been classified as a "crested" head specimen, although it is quite different from the others. From the marks left by legs, now broken off, it is obvious that the figure was sitting, probably with legs spread out. The hands probably did not rest on them, since there are indications of arm attachments on the body. A modeled necklace, recalling Lake Valencia examples, adorns the throat. The ears are pierced; coffee bean eyes, nose and mouth are not unusual. The thin upper border of the wide head is crowned by five "crests," flat and transverse cross-incised projections, each one of which is similar to the usual single crest to be found on preceding crested specimens.

**Uncertain Sex, Miscellaneous.** Only two specimens fall into this group. One is a crude head (A M) from the Distrito Torondoy, Merida, broken from a hollow bodied figure, the other a figurine from La Ceiba, Trujillo, on the shore of Lake Maracaibo (pl. XVIII, 7). It is hollow, open at the bottom and may have been broken and ground off, but I do not believe this to be so. The front is marked by perforations. The face is modeled in much the same way as are most Andean specimens. The cross-incised applied strip on the head is a feature not to be found among highland examples.

## *SUMMARY OF WESTERN FIGURINES*

The most important groups of western figurines are the female standing, female sitting and male stool-seated types. With the first there should probably be grouped those of uncertain sex, standing. Other groups, rare in the collections, are either clearly related in style but with no definite sexual characteristics, or clearly aberrant. Head forms cross cut these categories, as do ware divisions. Although crested heads occur in each group, they were apparently made less frequently than the quadrilateral or oval heads without crests. "Corded" heads are confined to female specimens among those I examined; male specimens are characterized by a predominance of oval or rounded head and a greater use of crests. However, Linné [30] describes and illustrates a stool-seated male specimen from an unknown locality in Venezuela exhibiting all the usual traits of such figurines, including posture, knee projections to upper arms, bowl in hand, belt, vertical punctate back strip, notched projection with hole at the back of the head and typical dark brown or black on white painted design. The only unusual feature is the "corded" oval head most usual on female examples. Linné ascribes the figure to the Lake Valencia region on the basis of a comparison with a specimen illustrated by Requena,[31] which, if it came from the Valley of Aragua, must have been a trade piece from the west, for we are now sufficiently familiar with the general appearance and distribution of Lake Valencia and Andean figurine types to distinguish them.

Solid bodies are rare; it is probable that they were never used in large specimens of true Andean types; rattle bodies are almost universal.

Modeling runs fairly true to form throughout; eyes are of true coffee bean style, double punch, or semi-double punch type on all specimens with the exception of those from Chiguara. Noses are not always present in modeled form and are always simple when present. Ears are usually pierced, even on simple specimens, and there are many definite examples of ear-plugs. Mouths are simple slits in the case of females. Males are often characterized by the addition of modeled teeth.

The belt and vertical back strip are modeled elements occurring on nearly all male specimens. Aside from these, there is little modeling on the bodies of any type.

Incision is not unusual. Broad incised or trailed lines encircle the upper legs of nearly all female specimens. Fingers and toes are often, but not always, marked by incision in both sexes. Incised body decoration is lacking.

The three important types and the related but sexually uncertain types are Andean. Presumably, both male and female types were made by the same people, since modeling and especially painted styles are often identical in both sexes. Probably they were made in the highlands from the mountains of western Lara to the mountains southwest of the city of Merida. It is possible that closely related, if not identical, types were made in western Merida and in Tachira, but there is no evidence from this area. Whether aberrant examples are the products of a different people or an earlier or later phase of the culture of the same people who left the common types, is, of course, a problem which can only be solved by excavation. Most of the unusual specimens discussed above were from outlying lowland areas, such as Betijoque and La Ceiba, in Trujillo, or from places not in the main Andean chain, such as Chiguara and the foothill country of central Lara. Naturally, dissimilarities with true Andean types will be apparent in these cases. On the whole there seems to be a uniformity among the important Andean types which implies fairly close cultural connections throughout the region as well as a relatively short period of activity in the manufacture of figurines.

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[30] Linné, 1937.

[31] Requena, 1932, p. 131.

## *STONE*

Andean stone objects in collections consist almost entirely of broad-winged ornaments and small figurines. The latter are usually suggestive of frogs but are sometimes definitely intended to represent human figures. Although it seems inconceivable that stone celts or axes were not in common use, they are notably absent among collection material. This may be due to the fact that village sites have not been excavated; collections represent grave contents. It is a fact, however, that at Carache, in the Andean foothills, no axes were found in the excavation at two village sites which produced masses of everyday pottery and refuse.

Beads of simple discoidal and cylindrical types are found, sometimes in graves. These are usually of quartzite, often pink in color, and are sometimes seen in collections.

**Broad-Winged Ornaments.** This term is used by J. A. Mason to describe stone objects of very similar appearance. He calls such ornaments from the Santa Marta region, Colombia, "Broad-Winged Pendant Ornaments." [32] Since many Venezuelan specimens are not drilled for suspension, the word "pendant" has been dropped.

Broad-winged ornaments have been noted and commented upon as characteristic of western Venezuela by a number of authors.[33]

Various theories as to their use and significance have been advanced. These include their designation as totemic symbols, musical instruments (the term "klangplatten" used for them by the Germans suggests this), breast ornaments (*pectorales*) and funerary ornaments. In this last connection there is a concomitant belief that they are conventionalized bat figures, representing the Bat God. This is supposed to demonstrate Mayan and Central American affinities in Venezuela. First suggested by Giglioli, the theory has had many adherents since.

It is certain that some of the broad-winged ornaments have been found in graves and *mintoyes* in the Andean region. Many others are of unknown provenance, but their distribution appears to have been confined to the Andes with the exception of some from as far east as Lake Valencia, possibly taken there in trade. Specimens have been found in Lara, Trujillo and Merida. I know of none from the State of Zulia.

Materials used in the manufacture of these ornaments are said to be nephrite, serpentine and diorite. The specimen (pl. XVIII, *8*) kindly identified by Dr. E. S. Larsen, Jr., of Harvard University, is of talc with tremolite, a very soft rock. Probably other attractive rocks were also used.

There are various types, but the most usual is that characterized by the central triangle, resting between the two wings (fig. 59, 7–*13*; pl. XVIII, *8*). Fig. 59, *1–16*, is intended to show a range of forms rather than examples of definite types.[34] Since all the specimens are to be found in collections, it would be fruitless to attempt to predict the relative frequency of different minor variations. Actually, those examples which lack central protuberances are rare in collections, as are those with rounded protuberances. The triangular center types are almost three times as common as all others combined. Those with central triangles which are in low relief, sometimes with a crude face, seem to be very rare.[35]

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[32] Mason, 1936, p. 179.

[33] Ernst, 1884, 1885b, 1888; Sievers, 1888, p. 22; Joyce, 1907, p. 419; Giglioli, 1910, pp. 321–330; Alvarado, 1912; Febres Cordero, 1920, pp. 11, 59; Heger, 1924; Jahn, 1927, pp. 321–322; Briceño-Iragorry, 1928, 1929, p. 179; Nectario María, 1933, part 4; Vellard, 1938.

[34] Vellard, 1938, indicates six "types," but they are not fully representative. Classification of these objects could be greatly refined but would be useless without excavation data.

Size is very variable. The smallest specimens are no longer than 3 cm.; there are many between 10 and 20 cm. in length, many more between 20 and 30 cm., fewer over 30 cm. The largest specimen I have seen, in the Briceño-Iragorry collection, measures 71.5 cm. in length.[36]

Thickness varies with gross size but is never great. Smaller specimens usually measure between 2 and 4 mm. Larger ones seldom exceed 1 cm. and are usually not thicker than 5 mm. The thickness of the huge Briceño-Iragorry specimen is only 1.5 cm.

As a rule the extremities of the wings are bevelled, but not sharply. The upper and lower borders are smooth, sometimes rounded, sometimes cut straight across. Polishing and cutting of ornaments was probably not a very difficult feat, since the stone used was not very hard. Most of it was probably harder than talc, of which the specimen illustrated in pl. XVIII, *8* was made, which can be scratched by the finger nail.

There is little more to be said in regard to broad-winged ornaments until some are found and properly recorded. They have excited more imaginative speculation than any other class of objects from Venezuela, but actually there is no evidence as to their use or significance, beyond the fact that sometimes they were placed in graves.

**Small Stone Figurines and Amulets.** Small stone human and frog figurines, many of them highly conventionalized, are almost as characteristic of the Andes as broad-winged ornaments but are much less common in collections. They have also aroused less interest and are little mentioned in the literature. Short references may be found in several works,[37] however.

Human figurines, from Tuñame, Distrito Urdaneta, Trujillo, and other Andean districts in Trujillo, are illustrated in pl. XVIII, *9*. They represent a range of forms, not a range of types based on a large sample. The materials used are similar to those of the broad-winged ornaments, that is, nephrite, serpentine, limestone and other fairly soft, green or dark stone.

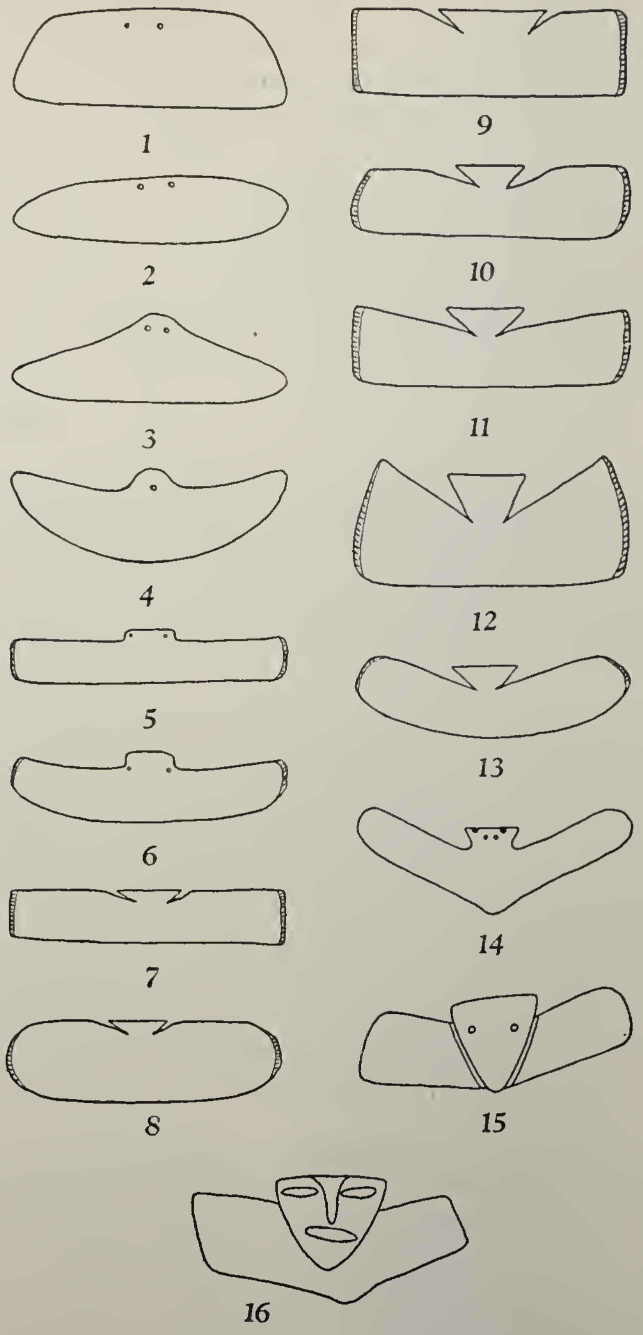

Fig. 59. Broad-winged ornaments, Andean area. Reduced to common scale; *15*, *16*, after Villard.

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[35] Vellard, 1938, p. 120.

[36] Briceño-Iragorry, 1928, pl. 5.

[37] Febres Cordero, 1920, pp. 11, 57; Briceño-Iragorry, 1929, pl. 5; Wassén, 1934, p. 343; Vellard, 1938, p. 125.

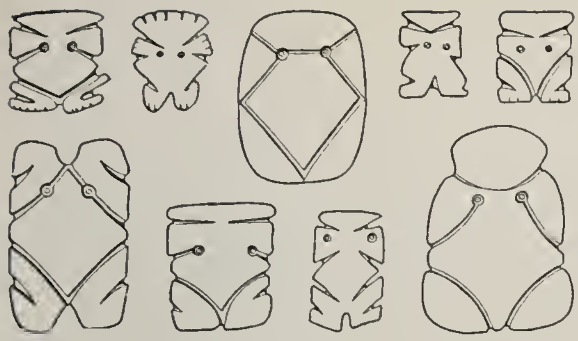

Fig. 60. Stone amulets, Andean area, ½.

In form human figurines vary tremendously. There are no two alike among the thirty-odd specimens examined. Some specimens are simple, with limbs and facial features marked by simple incised lines. Others are more carefully carved, with raised coffee bean or shoe button eyes, prominent noses and head crests.

Amulets, pendants, shown in fig. 60, are probably conventionalized frogs, although one or two may be human. Unlike true human figures, they are all characterized by two drilled holes. They are made of the same materials. In size they are very small, from 1 to 4 cm. in length and from 3 to 6 mm. in thickness. The specimens illustrated are from the *paramos* of western Trujillo; their exact provenance is unknown. In a sense, each specimen illustrated represents a type, since from two to four practically identical examples of each were noted. However, as in the case of broad-winged ornaments and human figurines, there is not enough known about these objects to justify a sub-divided classification of them.

## *SHELL*

**Beads.** Shell beads were found in some of the Lara sites, Zumbador and Santa Rosa especially, which produced practically nothing else. These are tiny, round, thin beads, 2 to 3 mm. in diameter and no more than 1 mm. in thickness. Other beads were found in some of the Lara collections. From Santa Ana, southwest of Barquisimeto, several larger beads were noted, some cylindrical in shape, and several of the flat, discoidal type.

**Broad-Winged Ornaments.** These are found in collections very much less commonly than are broad-winged stone ornaments. They have been noted in the literature especially by Giglioli,[38] Briceño-Iragorry[39] and Vellard.[40] Fig. 61 shows a selection of types drawn from collections, especially that of Briceño-Iragorry, and from the literature. Many specimens appear to have been found in Lara as well as in the highlands of Trujillo; Merida specimens seem rare, although this may have no significance. On the whole it is probably safe to say that far fewer of these objects were made than were made of stone.

Size is variable; the smallest specimens measure under 10 cm. in length, the large, elaborate pieces as much as 30 cm.

Small, simple types, such as are illustrated in fig. 61, *1*, *2*, are more commonly seen in collections than larger ones.

Fig. 61, *3* shows a specimen very similar in style to stone types. It is almost identical to specimens illustrated by Briceño-Iragorry[41] and De Booy.[42] Fig. 61, *4* is from near Barquisimeto.[43] This is decorated with incision and is perforated. The material is probably *Strombus gigas*, from which all the larger specimens are said to be made. There are four holes drilled from the top connecting with others drilled from the back, providing suspension holes without drilling through the piece. A few similarly perforated examples of a similar nature are present in collections as well. The two shown in fig. 61, *5*, *6* are from La Quebrada, Distrito Urdaneta, Trujillo.[44] The body incision on them is identical; the double heads differ slightly.

Fig. 61, 7, taken from Giglioli,[45] and also reproduced by Briceño-Iragorry,[46] is very

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[38] Giglioli, 1910.
[39] Briceño-Iragorry, 1928.
[40] Vellard, 1938, p. 122.
[41] Briceño-Iragorry, 1928, pl. 2.
[42] De Booy, 1916, pl. 7.
[43] Nectario Maria, 1933, pl. 1, no. 1.
[44] Briceño-Iragorry, 1928, pl. 6.
[45] Giglioli, 1910, fig. 5.
[46] Briceño-Iragorry, 1928, pl. 1.

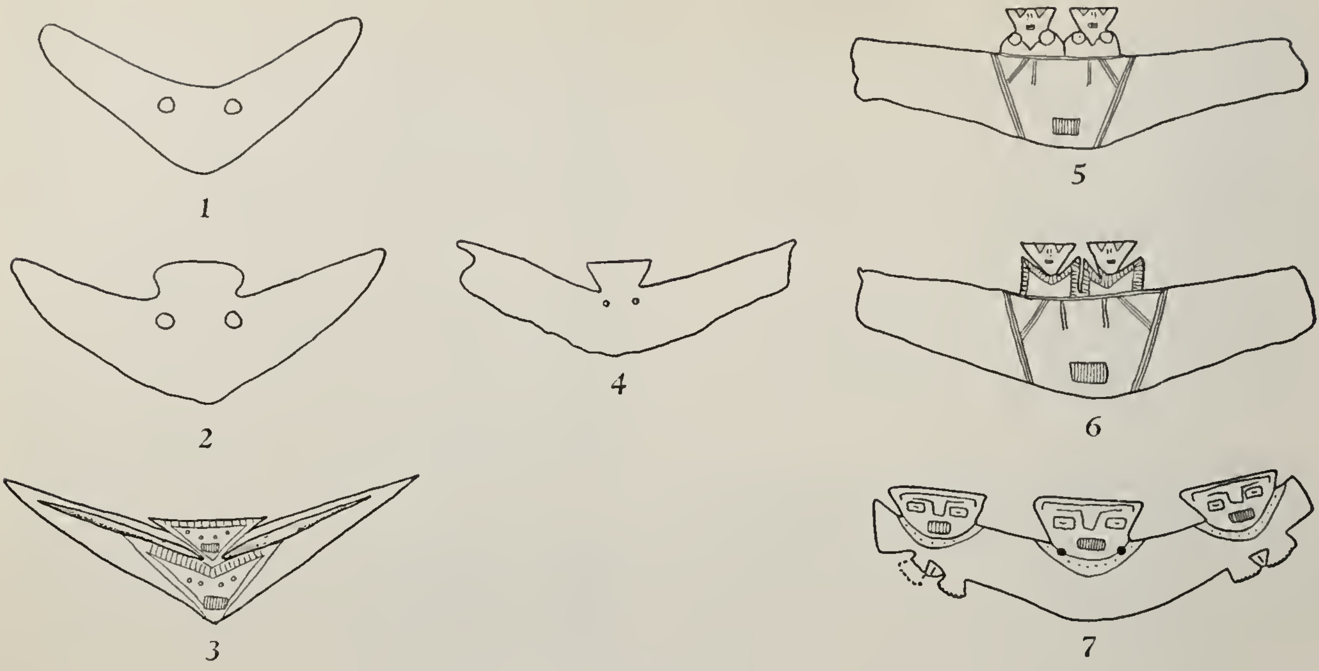

Fig. 61. Broad-winged shell ornaments, Andean area and Lara.

unusual, but the piece is incised in much the same style as the preceding two. The figures at the ends are obviously female. There are two drilled holes for suspension.

It seems probable that these objects were used in much the same way as those of stone, since some are so similar to the latter in shape. Like stone specimens, also, they are not all pierced for suspension. Although very little less difficult to carve or incise than stone, shell specimens generally exhibit far more incision.

**Amulets.** Nectario María found two shell amulets or pendants in a grave at Cerro Manzano, just south of Barquisimeto. I have not seen similar objects in shell from the Andean area farther west, but fig. 62, *1* is probably a frog very similar to those of the Andes in stone. It has a single suspension hole. Fig. 62, *2* illustrates what may have been intended for a bird; it was drilled twice.

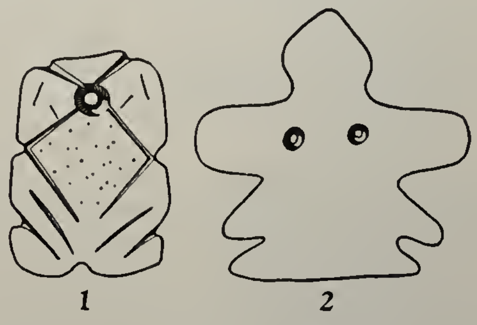

Fig. 62. Shell amulets, Cerro Manzano, Lara, ½.

## MISCELLANEOUS OBJECTS

Bone tools have not made their way into collections of Andean material. None were found at Carache, so that possibly not a great many were in use. Briceño-Iragorry[47] illustrates a small broad-winged ornament of bone from the Distrito Tocuyo, Lara. It is similar in shape to the shell specimen shown here in fig. 61, *2* but has only a single perforation.

Gold was apparently known but must have been very rare (pp. 10, 14, 17). I have never seen gold objects which were said to come definitely from the western Venezuelan highlands. In comparison to Santa Marta and interior Colombia, western Venezuela was obviously not a center of metallurgical activity.

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[47] Briceño-Iragorry, 1928, pl. 7.

# RELATIONSHIPS OF VENEZUELAN ARCHAEOLOGICAL CULTURES

## I. WITHIN VENEZUELA

THE relatively very little systematic excavation carried on in Venezuela, combined with the study of scattered collections, has made possible the definition, chiefly on the basis of pottery, of three phases of culture. These are the La Cabrera and Valencia Phases, isolated at Lake Valencia, and the Carache Phase in Trujillo. Information regarding other areas varies in fullness from that based on a few specimens to reports of survey and excavation. There are relatively full data for Trinidad,[1] Margarita Island,[2] the northern part of Falcon [3] and the Dutch Islands just off the coast.[4]

The remaining major areas from which specimens have been noted are central Lara and the Andes. From Betijoque, in Trujillo, and Punta de Leiva, near Maracaibo, there are a few specimens, as well as some from Arauquin, on the Apure delta,[5] from the Atures region,[6] on the Orinoco and from the middle course of the Arauca.[7] This exhausts the list of places from which more than one or two specimens have been noted.[7a]

Something is known, then, of the archaeology of the western part of the country on the coast and to a lesser extent inland, several central and south central areas and somewhat less of the eastern coastal islands, since the problems of Trinidad archaeology are far from solution.

It is obvious, upon segregating material from these various localities that there are considerable differences among them, more pronounced in some cases than in others. It appears that certain broad, generalized features were widespread over the area as a whole and that local variations were strongly developed. In some cases there are specific, as well as generalized, resemblances between objects from different sub-areas.

The most marked areal differences are those between the cultural phases of the west, including the Andes, the Maracaibo Basin, the Dutch Islands, Falcon and Lara, and those of the central and eastern region, as far as it is known, represented chiefly by the Valencia Phase material, with some, of different though related type, farther east. The La Cabrera Phase exhibits certain definite western affiliations.

In order to demonstrate this let us review the archaeology of the various sub-areas and phases with a view towards comparison among them.

## WESTERN VENEZUELA

### CARACHE, FALCON AND THE DUTCH ISLANDS

The material from the Dutch Islands, Falcon and Carache is closely comparable. That from the Andean highlands, and some from the Maracaibo Basin, also appears to be related to the island, Falcon and Carache group, but less strongly so than the components of the north coastal group are to each other.

Nomland has pointed out [8] the numerous similarities which are apparent between Falcon material, especially from the three sites other than Coro, and that from the Dutch Islands. Disposal of the dead in both areas was probably chiefly by secondary urn burial, although there is evidence that both direct secondary and direct primary burial were practiced at Coro.[9] There is also evidence, not absolutely conclusive, that primary urn burial was practiced on Aruba.[10] Actually, burial methods from these localities have never been fully recorded. Carache burials, on the other hand, were found to have been direct and primary, often slab covered, although, as noted above, Spinden [11] lists Carache as one of the places where urn burial has been found.

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[1] Fewkes, 1914; De Booy, 1917.

[2] De Booy, 1916.

[3] Nomland, 1933, 1935.

[4] Josselin de Jong, 1918.

[5] Petrullo, 1939.

[6] Marcano, 1890, pp. 99–218.

[7] Verneau, 1901.

[7a] The recent work of C. Osgood and G. Howard of Yale University has greatly enlarged this list of sites and collections, particularly in eastern Venezuela.

[8] Nomland, 1933, 1935.

[9] Nomland, 1935, p. 7.

[10] Josselin de Jong, 1918, p. 64.

Pottery is, as usual, the most useful trait in comparative work. The similarities between wares of the Falcon coastal area and those of the Dutch Islands are marked. Painted wares are common to both, but comparison of colors is difficult, since no standards were used in the description of wares from either area. Nomland lists [12] the following wares from all four Falcon sites: plain red, both slipped and unslipped, modeled red, plain gray-brown, black on white and black on red, the latter always rare. From La Maravilla and Hato Viejo: red on terra cotta, red on buff, red on tan, red and black on white. From Hato Viejo alone: maroon on cream. From Coro alone: burnished brown and incised ware. From La Maravilla alone: red on white, red on tan (very rare), black on orange (one sherd only). Josselin de Jong notes [13] unpainted ware, dark brown or red painted ware with unpainted (unslipped) background, brown, from light to nearly black, and red on white (slip). Brown on white is probably by far the commonest, although the collection is not representative, as he states.

From the above it appears that Nomland's material is far less homogeneous than that from either the islands or Carache, but I believe that analysis of her list will show that there are not as many radically different types of pottery as there appear to be.

Four types of unslipped ware may be classified together for purposes of comparison with other areas. Actually, Nomland has named her wares on the basis of color and decoration, rather than primarily on surface treatment, so that there are actually only three unpainted wares commonly represented, plain, red or gray ware and red unslipped ware. Burnished brown ware is confined to Coro.

Painted wares may also be broken up into too many "wares." There appear to be actually only three major groups. Black, maroon or red, on a white slip, may or may not be of the same ware. Nomland does not describe these colors; in view of the variation in Carache Red on White, it seems probable that they may be classified together for present purposes. Red on tan, terra cotta on buff, may be grouped together. Black on red is very rare; it may be a variant of the red or dark on an unslipped background, although it appears alien to Nomland.

Thus on the islands there are plain wares and painted wares of two styles, brown or red on an unslipped background and the same colors on a slipped background. Carache is characterized by only three major wares, plain red, red on red and red on white. Nomland's major Falcon wares seem to be plain (red or gray), red slipped, red (or darker) on white, red and black on white, dark (red to black) on unslipped background.

The marked presence of painted design on unslipped backgrounds as well as on white slip appears to be a common characteristic of the three groups of material. Falcon sites exhibit more actual types of ware than do Carache and the islands, possibly because of their central position, on the coast, less isolated than the other two localities.

Tempering material appears to have been the same in Falcon and on the islands; sand and shell were used in combination.[14] At Carache, it will be recalled, sherd and sand temper were used. The use of shell temper is probably partly, at least, connected with the coastal situation of the sites where it has been found.

Hollow rims, absent at Carache, are found at all Falcon sites except Coro [15] and on the islands.[16]

Comparison of vessel forms is difficult, since so few whole pieces were obtained at any of the sites under consideration. The large burial urns of Aruba [17] are not present in either of the mainland groups, but the large round bottomed jars of Carache may not have been unlike them in body shape, although they are marked, like Falcon jars, by more outcurved rims. Many of the Falcon plain ware jars are also of very large size.[18] There are little data on their full shapes.

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[11] Spinden, 1916, p. 327.

[12] Nomland, 1935, p. 78.

[13] Josselin de Jong, 1918, pp. 72–75.

[14] Josselin de Jong, 1918, p. 61; Nomland, 1935, p. 72.

[15] Nomland, 1935, p. 78.

[16] Josselin de Jong, 1918, p. 70.

[17] Josselin de Jong, 1918, pl. 15.

High necked jars, of which only one doubtful specimen was found at Carache, appear to have been present in Falcon,[19] only at La Maravilla, and on the islands.[20]

Spouted jars are also present on the coast and islands but not at Carache. These were probably double spouted in Falcon;[21] there are no complete specimens from the islands, but there are a number of broken off spouts.[22]

Bowls are usual in all three areas. The small, open bowls of Carache strongly resemble those of Falcon.[23] Bowls from the islands, other than coarse, heavy unpainted specimens, are not illustrated.

Griddles are not common at Carache, but they occur only at El Mamon and La Maravilla[24] in Falcon and are completely absent from the islands. Their apparent absence in many localities may be due to small samples.

Basal supports from the three areas are similar. The annular base is present in each; in Falcon[25] it was used on bowls as well as jars, as it probably was at Carache. Annular bases from the islands[26] are chiefly from painted ware. Falcon and Carache annular bases were often made with more flare than the island specimens and often with perforations, which the latter lack.

Leg-ring bases are common at Carache but seem to be rare from Falcon and the islands. Nomland illustrates[27] one high-legged specimen, consisting of four pairs of hollow legs rising from the basal ring. Lower-legged specimens, comparable to those of Carache, were found at all sites but Coro, apparently rarely. The islands produced a few similar low specimens.[28]

Free legs are common at Carache, both solid and hollow, and there is no doubt that tripod vessels were present, both as bowls and *incensarios*. Hollow and solid free legs were found only at Hato Viejo and El Mamon in Falcon;[29] very low, hollow feet are absent at Carache. There is every reason to believe that tripods were present in Falcon, as Nomland infers from the presence of hollow legs.

Handles in the typical Carache horizontal loop style are lacking from the two northern areas. They were apparently developed locally at Carache, with the heavy, split lug handle, since there is little like them from neighboring regions. There is always the possibility, of course, that the large loop handle and the split lug may be common on the poorly represented Andean plain ware. Pl. XIV, *8*, *15* indicates that the split lug handle was in use in the Andes.

The Falcon sites produced few loop handles; some small, vertical, double-strip, rim-to-shoulder specimens are present on Hato Viejo specimens.[30] Nomland states[31] that in general handles are much varied in shape and arrangement and usually vertically placed. Their elaboration by the use of modeled heads is usual. Many of them are simply lugs.

Handles from the island sites are fairly numerous.[32] They are round or flattened loops or lugs, usually modeled. They are all small; it is impossible to tell with certainty in what position they were placed on vessels; probably many were set vertically.

Curiously enough, in view of the wide distribution of figurines in Venezuela and the surrounding areas, none were found at Carache or the Falcon sites. They were found, however, on the islands,[33] probably rarely, although there are no means of ascertaining this. The only whole specimen is round bottomed and legless, but definitely female, and has a quadrilateral head, coffee bean eyes and mouth. Another broken specimen is also definitely female.

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[18] Nomland, 1935, pp. 38, 64.

[19] Nomland, 1935, p. 78.

[20] Josselin de Jong, 1918, pl. 15, nos. 10, 11.

[21] Nomland, 1933, fig. 5, a, c, f; 1935, fig. 12, a.

[22] Josselin de Jong, 1918, fig. 24, pl. 19, nos. 6, 8, 39, 46.

[23] Nomland, 1933, figs. 4, h, 5, h, j; 1935, fig. 16, f, g.

[24] Nomland, 1935, p. 78.

[25] Nomland, 1933, fig. 5, h; 1935, figs. 4, h, 9, f, 16, 19, f.

[26] Josselin de Jong, 1918, p. 69, figs. 15, 16, 17, 18, 19, 20.

[27] Nomland, 1935, fig. 4, o.

[28] Josselin de Jong, 1918, pl. 18, nos. 23, 30.

[29] Nomland, 1933, fig. 5, b; 1935, p. 78, figs. 14, i, 18, b, k.

[30] Nomland, 1933, fig. 2.

[31] Nomland, 1935, p. 74.

[32] Josselin de Jong, 1918, p. 71.

[33] Josselin de Jong, 1918, p. 75, pls. 18, no. 9, 19, no. 2.

The greatest similarity between wares from the three areas under consideration lies in decoration. Nomland points out resemblances to island material on nearly every page of her descriptive writing, with the exception of that devoted to Coro.

Modeled decoration on Falcon and island wares is very similar. Corrugated rims are found in both regions. Conventional animal-like figures, including frogs, "climbing" on sides and over rims are found on painted ware. These are made by the use of unmodified, rounded appliqué strips and nodes, combined with punctation and incision; the latter rare from the islands, but especially common at Coro. Coffee bean elements are common on the islands, as eyes, on heads possibly broken from figurines. They are less so on the mainland, apparently, but may be found as separate elements on some plain ware, especially from Coro. A more common type of eye is the unpitted shoe button, often surrounded by a roll of clay. These features may be checked by reference to Nomland and Josselin de Jong.

Carache modeling is somewhat different. Corrugated rims are absent, as are numbers of adorno figures. The most usual element is the wavy or meandering appliqué punctate strip. One wavy strip from Coro is shown by Nomland,[34] but this lacks punctation.

Some small Carache heads have pitted shoe button eyes, but those on the legs of leg-ring bases usually are unpitted. Such eyes are separated by a vertical strip with a ring of clay surrounding the whole. Identical facial representations were found on Aruba [35] as well as a number of other similar specimens, lacking the surrounding ring. These may all have been on leg-ring bases, as some unquestionably were.

There is no doubt that the coastal sites, with the exception of Coro, are closely related to the islands as far as modeled decoration is concerned.

Painted design from Falcon and the islands is also closely related, and there are a number of designs which suggest Carache from both areas, although specific treatments naturally vary locally. From the published illustrations it does not appear that banding combined with strict paneling was carried to such formalized lengths as it was at Carache. This may be due to the lack of whole pieces from these areas, however. Painted decoration is formal, but variation seems greater in the layout of design.

It will be recalled that Carache design is characterized by a variety of bands in fine lines or in combinations of heavy and fine lines, usually opposed triangular or trapezoidal elements, often concentric. Similar elements, often concentric, may be seen on sherds from both coast [36] and islands.[37] The use of spirals is also apparent on the coast and island sherds, although there appear to be no opposed spirals, filling the quadrants of a bowl in the Carache style. The northern spirals [38] are small, rising singly from thickened bases, or are larger, with more curves and no thickening; in one case small spirals are set off by "ladders" in a band, a Carache trait.

Specialized spirals, resembling Carache types, occur at Hato Viejo; [39] one is an angular spiral, the other a spiral set with "ticks."

One of the closest design analogies between the north coast and Carache is expressed by the use, in one case, of small "hook" spirals set off in a fine-line band by groups of diagonals; next to the spiral there appear to be pairs of comb elements, placed back to back.[40] This is definitely a Carache feature; there combs are used very much more commonly.

Negative design occurs in Falcon at all sites, with the exception of Coro, and on the islands. By this is meant the formation of the design in background color, outlined by paint. Whether one sees such designs as negative depends on the observer to a considerable extent. Most of such designs differ from those of Carache, but there are two examples of the "hour-glass" type of band from La Maravilla.[41] These lack blobs in the center of the "negative" spaces between the "hour-glass" elements which characterize Carache specimens; otherwise they are identical.

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[34] Nomland, 1935, fig. 6, m.

[35] Josselin de Jong, 1918, pls. 18, no. 26, 19, no. 12.

[36] Nomland, 1933, figs. 4, a, b, h, 5, h, 8, b, d; 1935, figs. 12, g, 19, n, o.

[37] Josselin de Jong, 1918, pl. 17, nos. 22, 27, fig. 16.

[38] Nomland, 1933, fig. 5, j; 1935, figs. 15, m, 16, a, f, g; Josselin de Jong, 1918, pl. 17, nos. 3, 8, 18, 43, and 54.

[39] Nomland, 1933, figs. 5, i, 8, c.

[40] Nomland, 1935, fig. 16, f.

Painted circles, edged with small triangular or cruciform elements resembling rosettes,[42] are fairly common in Falcon and on the islands but lacking at Carache. They apparently are set in panels, but none are on sherds of sufficient size to show whether they formed parts of bands.

The above brief résumé of similarities and differences between pottery from the Carache, Falcon and Dutch Island regions indicates that there is probably a stronger relationship between the three in painted design and such elements of vessel shape as annular bases, leg-ring bases and tripods than is expressed by modeling techniques. Nomland sets Coro aside in her comparisons, due to the predominance there of incised wares rather than painted wares. This she feels [43] may be a reflection of either local development or a chronological difference. She suspects the latter, probably rightly, since Coro and La Maravilla, which is closest to it, are quite dissimilar. It appears natural that Carache should be even more different from the northern coastal and island groups, on account of its distance from them; yet there are closer analogies between Carache wares and those from Falcon and the islands than there are between Carache wares and those from any other area with which we are familiar at present. The area north of Carache may eventually produce related materials.

Stone work in the form of celts was not found at Carache. The coast and islands produced a considerable quantity. Most celts are badly broken, but petaloid forms are present, as well as flatter, non-parallel sided celts, gouges and hammer stones.[44] The same applies to the islands; [45] Nomland has pointed out a number of specific similarities in stone work.

It is interesting to note that no true metates were found on either the islands or the coast, although a stone "mortar," a "muller" and a "pestle" are illustrated by Nomland.[46]

### Maracaibo Basin

Betijoque and Punta de Leiva, two poorly represented sites in the Maracaibo Basin, have produced material which demonstrates that there is some relationship between them and the Falcon and Dutch Island sites. This is probably strongest in the case of Punta de Leiva material, which shows several very apparent and specific resemblances to the previously discussed group. Punta de Leiva has urn burials, probably secondary; in these were found a plain ware vessel (fig. 51, *1*) with corrugated neck decorated by an applied, cross-incised "U"-shaped strip. Neck corrugation is a feature of plain ware in many cases both in Falcon and on the islands. An almost identical cross-incised strip is illustrated by Nomland.[47]

Another vessel found within one of the urn burials at Punta de Leiva has double spouts and an annular base. The annular base is also present on one of the large urns (pl. XIV, 7). The spouted vessel (fig. 54), once decorated with painted design in dark on unslipped background, has spouts with modeled, conventionalized faces made of strips and nodes, almost identical to spouts from Falcon.[48] The eyes, unlike most of those from Falcon specimens, are pitted, rather than plain. No similarly decorated spouts are illustrated from the islands.

Betijoque is so poorly represented that it is difficult to compare it with other areas, but it exhibits a definite painted ware complex. One sherd, in black on orange, may indicate some relationship with the Falcon region, although there black on orange ware is represented only by a single sherd [49] from La Maravilla. Betijoque seems to exhibit strongly local tendencies in design, with more general Andean than coastal resemblances in style. The hollow legged, presumably tripod vessel, which occurs at Betijoque, is not definitely a lowland trait in Venezuela, but this form seems rather more common proportionately from the north coast and Carache than from the higher Andean region. Betijoque figurines are very similar to Andean seated female specimens. This site should prove extremely interesting upon excavation; no burials from it have been reported, and there must be considerable sherd material in the region. At present it is so sparsely represented that nothing further can be said of its relationships with any certainty.

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[41] Nomland, 1935, figs. 18, i, 19, b.

[42] Nomland, 1935, figs. 15, j, l, 18, j; Josselin de Jong, 1918, pl. 17, nos. 10–12, 14, 36–38.

[43] Nomland, 1935, p. 77.

[44] Nomland, 1933, fig. 7; 1935, figs. 13, j, l, 17, 20, f–l.

[45] Josselin de Jong, 1918, pls. 22–27, p. 95.

[46] Nomland, 1935, figs. 17, s, t, 13, m.

[47] Nomland, 1935, fig. 19, d.

[48] Nomland, 1933, fig. 5, c, f; 1935, p. 48.

[49] Nomland, 1935, p. 67.

### Andean Region

The Andean region, including part of western Lara, but excepting Carache, also provides evidence of local developments.

Burial methods apparently varied considerably, but there is no evidence for urn burial of which I am aware other than the statement by Spinden[50] that it occurs in the vicinity of Merida and Valera. Both of these cities are relatively low lying; it is doubtful whether urn burial was practiced in the higher regions.

Our knowledge of Andean pottery is confined to a few plain ware specimens, some painted ware and figurines. The vessels, in many cases, exhibit features of form which they share with the coastal, island and Carache areas. These are primarily annular bases, often perforated, leg-ring bases and tripods. The large number of small tripod vessels, mostly of solid leg type, is a definitely Andean feature. The presence of *incensarios* at Carache probably reflects highland influence.

The most technically advanced pottery was probably achieved somewhere in the Andes. From other areas there are no examples of the finely finished effigy vessels, often tetrapod, and large figurines of the type shown in pl. XVIII, *3*, *4*. Tetrapod vessels with high, hollow legs are apparently lacking from other areas also, although this may not be true in view of the fragmentary condition of most of the available study material.

Painted design exhibits certain features indicating a connection, although propably not a close one, with neighboring areas. Banded and paneled design is usual, but the use of elements and the elements themselves differ strongly from Carache, for instance. One exception may be Tuñame, Distrito Urdaneta, which produced a vessel (fig. 55, *1*, *2*) in Carache style. Tuñame is so little known, however, that no conclusions can be based on this single occurrence. Andean painted vessels, banded or paneled, are characterized by a cursiveness and complication of design, especially in the use of spiral elements, which is lacking at Carache and in the north. There is considerable general resemblance between Andean and Carache painted ware styles, but they share very few specific features. Design in the negative may indicate relationship with Falcon.

Modeled decoration is not common on vessels, but when it occurs it is either rather crude, chiefly confined to plain ware, or else elaborate and skillfully executed on the rare examples of effigy vessels.

The most striking Andean feature is the presence of figurines, male and female, of very homogeneous types. It has already been pointed out that lack of these at Carache and to the north in Falcon indicates some distinction between Andean and north coastal culture, and that the only northern lowland figurines so far known are those from Betijoque and the few from the islands. Male figurines seem to have been entirely confined to the Andes, extending eastward as far as the high mountains in the Distrito Tocuyo in southwestern Lara.[51]

Andean female figurines of standing and sitting type are not dissimilar in generalized features of posture to those of the Valencia Phase. Coffee bean or double punch eyes are universal, with the exception of the Chiguara specimen (pl. XVIII, *1*), which probably may be referred to a further western phase as yet unisolated.

Andean stone work is markedly distinctive. Broad-winged ornaments are characteristic of the area and have been found as well in central Lara and the Lake Valencia region. As yet it is uncertain whether these objects reached the eastern areas in trade, but some, at least, were probably made locally. The Andean area definitely seems to be the center of their greatest frequency. A further Andean type of stone work is the small figurine and the amulet, often cut to resemble a conventionalized frog. These do not appear to have occurred commonly in other parts of Venezuela, although objects of shell carved in somewhat similar style are not uncommon, and some in stone have been found at La Mata.[52]

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[50] Spinden, 1916, p. 327.

[51] Linné (1937, p. 28) assumes that such figurines are from Lake Valencia, on the basis of a specimen illustrated by Requena (1932, p. 131). This is unquestionably a trade specimen, or was not found in the Lake Valencia Basin. Painted male figurines are foreign to both the La Cabrera and Valencia Phases.

Taken altogether, the Venezuelan Andean material seems particularly distinctive in comparison to that of surrounding areas, a condition which seems to reflect the semi-isolated, highland nature of the area.

### LARA

The Lara region is represented by a group of material from scattered sites. Some of it is definitely Andean in type, some resembles the Carache and Falcon material. Burials in urns have not been reported; primary burial was found at Cerro Manzano.[53]

Pottery from the Distrito Tocuyo is chiefly plain ware; round bottomed jars, bowls with low annular or leg-ring bases and tripod vessels occur. Some of the leg-ring specimens are unusual, with narrowed ring or extra, nonfunctional legs. One painted specimen (pl. XVI, *16*; fig. 56) is distinctly reminiscent of Carache, as are *incensarios*. However, there is so little known of the occurrence of various forms in the Tocuyo area that we cannot be sure whether more than one phase is represented. I suspect that in future Carache Phase material may be isolated in the hills of southwestern Lara, and that most of the Tocuyo pottery illustrated here may ultimately be assigned to another cultural category.

Central Lara provides, at present, a somewhat more satisfactory situation. Cerro Manzano pottery is characterized by plain and painted ware, although design cannot be distinguished on the latter. Shapes are probably not fully representative, but annular and leg-ring bases are present on bowls, sometimes carinated as in the Tocuyo district. Tripod legs, both solid and hollow, are also common. These support small jars rather than open bowls. Bowls with hollow, tripod legs in dark on light ware (pl. XVI, *9*, from Santa Ana) were made in the area, however, recalling Carache in general style.

Unique specimens from Lara are pot-stands with modeled frog decoration. No similar pot-stands have been noted from other parts of the country. The true stirrup-spouted jar (pl. XIV, *6*) is also unique.

Elbow pipes occurring in the Barquisimeto area have their only local analogies in the La Cabrera Phase at Lake Valencia and in a possible Falcon specimen.

The Lara region should prove extremely interesting, if sites similar to Cerro Manzano can be discovered. The few specimens known from this area point to relationships with the west, the Andes and possibly Carache, as well as to the east — the La Cabrera Phase. No very definite analogies can be pointed out with Falcon and the islands, but general resemblances in basal supports, modeling and the use of paint are present. Figurines in collections from this part of Lara are of doubtful provenance; they are probably not from the phase of culture represented at Cerro Manzano.

The archaeology of western Venezuela, then, appears to be susceptible of division into three general groupings. The first, from the north coastal area, is represented by the Dutch Islands, Falcon and Carache and probably parts, at least, of the material from the Maracaibo Basin, at present represented by a few Punta de Leiva specimens. The second is Andean, with the possibility that Betijoque, in the lowlands, is related. The third, from parts of western Lara and the Barquisimeto region, although evincing relationships to both of the preceding areas, is closely related to neither, and since it is represented by so few specimens at present, it is unsafe to do more than segregate the specimens as a separate, though little known, group.

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[52] Bennett, 1937, p. 127, fig. 17.

[53] Nectario María, 1933.

## *CENTRAL VENEZUELA*

In central Venezuela definite and specific relationships with western material are chiefly apparent in the La Cabrera Phase, at Lake Valencia, but work in the area between Lake Valencia and Barquisimeto would probably disclose additional phases showing western traits.

### La Cabrera Phase

The La Cabrera Phase, with primary burial apparently the exclusive method, appears to show closer relationships to central Lara culture than to any other. It is doubtful whether primary burial can be called a western trait in Venezuela proper, in view of the wide distribution of secondary urn burial. Urn burial may be a later practice, considered as a widespread South American trait, and as such may be expected to follow direct primary burial at a given site, but it is questionable whether burial methods in any area like Venezuela, where variations are so great, are as important as ceramics in the solution of chronological problems. Thus, although the La Cabrera Phase and the Barquisimeto regions are apparently more closely linked by the use of direct primary burial in both, ceramic similarities are undoubtedly more important, just as they seem to be in the comparison of Falcon and Carache, where burial methods differ.

The La Cabrera Phase may be said to indicate western affiliations in a general sense, and most of the traits which support this view seem most closely analogous to those found in the scanty central Lara material. Thus dominance of unpainted ware, very low leg-ring bases, supporting carinated bowls with incurved rims, resembling La Cabrera Phase bowls of Polished Gray ware more than they do any other Venezuelan type of bowl, both appear to be significant. The presence of pipes in Lara is another factor which indicates a connection. Nomland illustrates [54] what is probably a broken elbow pipe from Coro, an undecorated specimen, the only one from Falcon. This strengthens the western relationship of the La Cabrera Phase. The distribution of the elbow pipe in Venezuela has thus been extended from Lake Valencia to include Lara and Falcon, but the number of specimens from these states, only three in all, hardly warrants conclusions as to the direction of dispersal. At present Lake Valencia, with its profusion of pipes of plain and decorated type in the La Cabrera Phase, would appear to be a center of dispersal for the area as a whole, but there can be no certainty of this until more data on their distribution and frequency in the west have been gathered.

On the other hand, there are La Cabrera Phase traits which do not occur in Lara. In the light of our present knowledge this is probably not conclusive. However, the lack of red slipped ware, similar to La Cabrera Red, is probably significant, and this is a ware which is lacking throughout the western area with the exception of Falcon.

Spouted jars with connecting strip handles are not present, as far as I know, among any of the western Venezuelan collections. Spouts, both single and double, do occur, but the spout with bridge type of jar found at Lake Valencia appears to be absent. The only comparable specimen is a single jar collected by Spinden at San Fernando de Apure, on the Apure River in the *llanos*. This plain ware specimen shows two bulbous spouts, each decorated by a face, connected by a bridge handle. The modeling of the faces is somewhat cruder than that of the La Cabrera examples, but the likeness to them is obvious, both in position of spouts and handle, and the use of the face on the spouts.

It cannot be stated with certainty that tripod vessels were present in the La Cabrera Phase, but there is some indication, at least, that they were. In the west their association with leg-ring bases is not proven for every area, where one or the other form occurs, but seems fairly definite. The knowledge that tripods formed a part of the La Cabrera Phase pottery complex would certainly increase the evidence for western relationships. At present, although very probable, this occurrence must remain in doubt.

Tetrapod basal supports have been noted for the Andean region. One was found at Los Tamarindos, but of entirely different type. This may or may not be significant.

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[54] Nomland, 1935, fig. 11, f, p. 15.

Lack of figurines in the La Cabrera Phase may also be significant, especially in a comparison with the Andes. The presence or absence of figurines in Falcon and Lara is still very probably open to question. We know there are some from Lara, but whether they can be referred to the complex represented at Cerro Manzano is in doubt. The strong Andean analogies present in Lara, in the form of leg-ring bases, tripods and broad-winged ornaments of stone and shell, make it probable that figurines are present in most phases of Lara archaeology.

La Cabrera Phase decoration does not point to any particular western area. Round and coffee bean eyes are both found in the west, but the protuberant, unpitted shoe button eye, surrounded by a ring of clay and often found in Falcon, does not occur in the La Cabrera collection. Unpitted round eyes are rare at La Cabrera and always seem to have been low, tube punched rather than of shoe button type. Climbing adorno figures are rare and are also present in the Valencia Phase. This is a widespread trait, one which does not strengthen sub-areal comparisons unless the specific resemblances are more marked than they seem to be.

Three apparent trade pieces (pl. IV, *16–19*), found in the Los Tamarindos lower levels, in association with La Cabrera Phase pottery, seem to point to the west. The leg and adorno are both painted in a general western style, not typical of any known site, but giving an impression of Carache or Lara. Hollow tripod legs are notably absent east of Lara; the painted leg was undoubtedly broken from a vessel and was very probably one of three. The adorno, besides its painted design, has simple faces on each "wing," made with pitted shoe button eyes, and an incised mouth, entirely comparable to Carache types, which occur on legs or handles. The frog is typical of no area in particular. I believe that these pieces are characteristic of definite phases, probably in the west, which have not, as yet, been located.

Some similarities of La Cabrera Phase pottery to that of Trinidad are pointed out below.

In stone work, there are no Venezuelan analogies to the flaring edged, oblique polled celt, probably confined to the La Cabrera Phase. If made locally, the small broad-winged stone ornament found in the lower levels at Los Tamarindos indicates another western analogy.

## Valencia Phase

A comparison of the La Cabrera and Valencia Phases has already been made (p. 81). It is evident that the later phase lacks many of the traits which may be considered western. The dominance of urn burial is, as I have said, probably not significant in this respect, but the pottery lacks the leg-ring and tripod support complex, probably the most important evidences of western affiliation.

Spinden, commenting on Lake Valencia archaeology, states[55] that "connection with the Andean region is evident in pottery shapes as well as in the styles of decoration." That is, of course, true in a general sense, especially in regard to female figurines, but the lack of painted decoration, certain types of basal supports and the local specialization and homogeneity of shape in the Valencia Phase do not appear to be indicative of Andean connections in particular. Modeling and the use of adornos, along with a lack of painted decoration, are, in themselves, not especially eastern Venezuelan since they occur widely throughout the whole northern South American area. It is true, however, that painted design is far more common west of the Valley of Aragua than to the east, where its known occurrence only near the coast, especially in Trinidad, may be the result of coastwise contacts or simply the result of almost total ignorance of inland archaeology in the region.

The occurrence of the annular base in the Valencia Phase is not surprising, since this form of support is far wider spread over the whole continent and islands than either the leg-ring or tripod types. The evidence is, I feel, strongly in favor of its being a late feature in the phase, although a lower form was known in the earlier times of the La Cabrera Phase.

Figurines, dominantly female, are an important element in the Valencia Phase. Both standing and sitting types are not dissimilar in shape to those of the Andes, although the

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[55] Spinden, 1916, p. 326.

Valencia specimens are never painted, never have "corded" heads and usually are more exaggeratedly female.

In modeled decoration the Valencia Phase exhibits generalized similarities to a number of western areas. The coffee bean or double punched eye is an obvious one, as is the round eye, here nearly always confined to animal representations on adornos, and only very rarely unpitted. Appliqué and punctate strips are common; they resemble similar strips on Carache vessels but are applied in a vertical, rather than horizontal, position. Effigy vessels with bulging necks are also common; these do not seem to occur often in western Venezuela, but one is illustrated from Aruba.[56] The use of rim adornos is more usual in this phase, and there is, in general, a greater proportion of purely modeled decoration than is to be seen anywhere in the western part of the country. The implication inherent in this statement is that modeled decoration is an eastern trait. This is probably so, but its extension westward is well known. The Lake Valencia region happens to have been the seat of a local development in this type of decoration in later times. The products of this development are characterized by a local style which cannot be mistaken, after some observation. It will be some time before we can say with any degree of certainty just where the idea of modeling developed, how it spread, which of its centers, like Lake Valencia, appear to be later and which earlier, and, indeed, whether it actually became highly developed before the use of paint became general.

## Llanos and Atures

Before passing to the eastern sites, the *llanos* should be considered briefly. Here we know very little of the archaeology, but urn burial appears to be widely distributed. Geay [57] reports it from the Portugesa, Apure and Arauca Rivers, Spinden [58] from the same areas. He implies that this was primary urn burial, as it is noted on Nordenskiöld's table.[59] This is probably not so, at least in all cases, since Verneau distinctly refers [60] to multiple secondary urn burial from the Arauca. Spinden does not mention where any specific case of primary urn burial has been found.

The large urn illustrated by Verneau [61] has a roughly flat bottom with sides which rise a little more steeply than do those of Valencia Phase specimens. The shoulder flares out in the same way, however, but the rim is high, straight and slightly outcurved at the lip. This pottery is a plain, poorly smoothed ware. Figs. 3 and 4 of the same publication illustrate mat or basket impressions, one in "checkerboard," the other in twilled weave. These may have been on platters; they are apparently entirely comparable to the La Cabrera Phase specimen.

Other pottery from the *llanos* is not known, with the exception of the double-spouted jar from San Fernando de Apure, some Arauquin specimens and some illustrations by Geay.[62] The latter show two vessels of *pimpina* shape, an effigy pitcher form and what appears to be the upper part of a double-necked jar, decorated with a face consisting of coffee bean eyes and mouth and strip eyebrows diverging from a slightly elevated nose. The sides show appliqué punctate strips in typical Valencia Phase style, which, indeed the whole illustration recalls. No provenance is given. It is, of course, possible that the piece is actually from Lake Valencia rather than from farther south on the *llanos*.

Arauquin [63] is a site which should repay further examination. The material already collected consists of elaborately incised and punctate rim sherds, modeled adorno heads and what may be spouts. There appears to be no painted decoration. Stylistic similarity to the Valencia Phase is apparent in some pieces, particularly faces modeled on vessel walls.

Sites near Atures, in the region of the Orinoco cataracts, produced a number of secondary burials in urns.[64] The bones had either been whitened, reddened or treated with a resinous substance. They were found in burial caves, contained in covered urns of distinctive shape, round bottomed with straight or slightly convex walls converging to form an orifice of smaller diameter than the base. Decoration is usually lacking, but the lids usually are surmounted by a quadrupedal animal figure, rather crudely modeled with a slit mouth and punched eyes.[65] Some specimens have a band of repeated "T"-shaped frets done in incision and punctation around the neck.

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[56] Josselin de Jong, 1918, pl. 15, no. 10.

[57] Geay, 1895, p. 172.

[58] Spinden, 1916, p. 327.

[59] Nordenskiöld, 1920, p. 194.

[60] Verneau, 1901, p. 156.

[61] Verneau, 1901, fig. 1.

[62] Geay, 1895.

[63] Petrullo, 1939.

[64] Marcano, 1890, p. 108.

Many of the skulls recovered from these sites are stated to have been frontally deformed.[66] One of the two skulls from the Arauca, illustrated by Verneau,[67] is similarly deformed; this is a feature shared with Lake Valencia.

## *EASTERN VENEZUELA*

### Margarita and Trinidad

The entire region comprising the States of Monagas, Guarico, Anzoategui, Delta Amacuro Territory and State of Bolivar, that is, the whole of northern Venezuela east of Lake Valencia, is unknown archaeologically with the exception of Margarita Island.[67a]

This island and Trinidad have produced material which suggests strong mainland relationships, a perfectly natural condition since both are very close to the continental shore. They also share a number of features.

Archaeological work was done in three shell heap sites, one in Margarita[68] and two in Trinidad, on the east coast near Cape Mayoro,[69] and on the south coast at Erin Bay.[70] Burials were found only at Cape Mayoro, where two in squatting position were taken from the St. Bernard midden. The skulls had apparently been deformed frontally. On Margarita the presence of a considerable quantity of split human bones suggested to De Booy the possibility of Carib raids.

Pottery from these islands is either plain, red slipped or painted. Margarita produced only three painted sherds, and no painted design was found at Erin Bay; at Cape Mayoro painted ware was plentiful.

Plain or red slipped ware was made chiefly in bowl forms, often with large, vertical "D"-shaped handles, usually with modeled heads. Fewkes shows[71] Erin Bay bowl shapes which strongly suggest some of the La Cabrera Red carinated bowl fragments (fig. 17, *30–57*). None of the Cape Mayoro bowls appear to be of this type, but they are usually characterized by strongly outcurved rims incised on the tops;[72] some Erin Bay rims are also of this type. Outcurved rims, incised on the top borders, in red slipped ware (pl. V, *35*, *36*) are rare in the La Cabrera Phase, but occur nowhere else, so far as is known, in the Lake Valencia or other central and western Venezuelan areas.

Aside from bowls there are heavy griddles or platters, comparable to Lake Valencia specimens, and other forms, including a handled pitcher and a vessel in the shape of a foot from Margarita,[73] as well as small spool-shaped pot-stands from Cape Mayoro.[74] Basal supports are lacking, with the exception of annular bases, from Trinidad.[75] Head adornos were also placed on rims. De Booy states[76] that there is a marked similarity between Trinidad and Margarita in these heads, which is apparent on an examination of the illustrated material. Decoration was achieved by means of modeling and incising, both on the bodies and rims of bowls. None of the modeled adorno heads are exactly similar to Lake Valencia specimens of either phase, but there is a very definite general resemblance between adornos from the two areas. Margarita and Trinidad heads never have true coffee bean eyes; apparently this trait is not usual east of Lake Valencia. Some eyes are elliptical incisions with a linear central incision.[77] Usually, they are round, simple pits, pitted or unpitted shoe buttons, some low, some raised, surrounded by incision or rings of clay, although the latter appears to be rare.

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[65] Marcano, 1890, fig. 16; Hamy, 1897.

[66] Marcano, 1890, p. 153.

[67] Verneau, 1901, fig. 3.

[67a] Since this was written a site near Barrancas, on the lower Orinoco has produced elaborate incised and painted wares which relate to Erin Bay, Trinidad. (Osgood, 1942.)

[68] De Booy, 1916.

[69] De Booy, 1917.

[70] Fewkes, 1914.

[71] Fewkes, 1914, fig. 64, pl. 14, c, d.

[72] De Booy, 1917, pl. 4, a, b, c; pl. 5, b.

[73] De Booy, 1916, pl. 1.

[74] De Booy, 1917, pl. 7, c, d.

[75] Fewkes, 1914, fig. 64; De Booy, 1917, pl. 7, c, d.

[76] De Booy, 1917, p. 483.

[77] Fewkes, 1914, pls. 18, e, 19, e, f; De Booy, 1917, pl. 7, a.

There is one head representation from Erin Bay [78] which closely resembles the La Cabrera Plain ware leg illustrated in pl. II, *1*, *2*. It is not clear whether the Trinidad specimen is a leg or adorno, but the eyes, nose and basal slit mouth are extraordinarily alike in both specimens.

Decoration in pure incision is common among the island specimens. It is in combinations of straight and curvilinear lines, on the whole comparable to La Cabrera Phase incision, especially, as noted above, on bowl rims. Incision combined with punctation, so usual at Lake Valencia, especially in the La Cabrera Phase, seems to be lacking. The more elaborate incised design is not specifically comparable to other Venezuelan incision.

Painted ware, confined to Cape Mayoro, with a few probable trade pieces from Margarita is decorated with white, yellow, brown, black and red paint, singly and in combination.[79] Sherds indicate round and oval bowls and annular bases. De Booy believed that some of the vessels were spouted, from the fact that several modeled and painted hollow heads had openings at the top.

There is one Erin Bay fragment [80] which may indicate the presence of the leg-ring base at Trinidad. This is a crudely modeled and painted head, topped by a piece of the base of the bowl and mounted on what appears to be a part of a basal ring. It is said to be a part of base. If this is so it represents the most easterly occurrence of the leg-ring base in the northern part of South America. The presence of modeled face is comparable to Aruba and Carache methods of leg decoration for leg-ring bases.

Design cannot be fully reconstructed from the sherds and hence cannot be closely compared to western Venezuela painted wares. The closest relations of Cape Mayoro wares are with the Lesser Antilles and the Crab Culture (Cuevas type) of Puerto Rico.[81]

Stone work from the islands under consideration is of considerable interest, since, besides the ordinary petaloid celts characteristic of Falcon and the Valencia Phase, also probably the usual type of celt from the Andes, notched axes of the so-called "Guiana" type [82] occur on Margarita and Trinidad. This is a roughly rectangular axe, fairly flat in section, with deep notches at each side, near the poll. It is so named on account of its eastern distribution in the Guianas between the mouths of the Orinoco and the Amazon, in the Guianas.

Besides the notched type, there are slightly grooved axes from Margarita.[83] In this type the groove is also close to the poll.

Other stone objects from both islands include hammer stones, polishing stones, mortars and pestles. There is no more evidence for the metate than in any other part of Venezuela.

De Booy found two fragmentary shell objects, made from the lips of conch shells; [84] these may well have been broad-winged ornaments similar to Andean specimens.

Comparison of material from these eastern islands and the mainland seems to point to general relationships with the whole Venezuelan area, expressed in such general similarities as painted ware, the use of incision and modeling, the annular base and petaloid celts. More specific analogies are apparent between the La Cabrera Phase and Trinidad, particularly Erin Bay. These are red slipped ware, bowl shape, outcurved and incised bowl rims and some other similarities in style of incision. The La Cabrera Phase is thus marked both by western and by eastern analogies, indicating, perhaps, that Lake Valencia, through its central and favorable location, received cultural influences from many directions for some time.

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[78] Fewkes, 1914, pl. 19, e.

[79] De Booy, 1917, p. 485, fig. 62, pl. 8.

[80] Fewkes, 1914, fig. 72.

[81] Rainey (1940, pp. 172-174) gives a summary of Trinidad archaeology and its Antillean relationships. See also Rouse, 1940.

[82] De Booy, 1916, pl. 5, a, b, c.

[83] De Booy, 1916, fig. 12, pl. 5, d, e, f.

[84] De Booy, 1916, pl. 6, c, d.

## *II. OUTSIDE VENEZUELA*

The more widespread relationships of Venezuelan archaeological phases may now be considered. Some indications of the trends responsible for local conditions have been given. However, there is a difference between the alignment of groups of material within an area and the formulation of conclusions with regard to external relations. Without some sort of chronological assistance we can never be sure of the direction of influences, no matter how seemingly apparent a given hypothesis may be. A case in point is the general concensus of opinion among Venezuelan prehistorians,[85] largely influenced by Spinden,[86] that the higher cultures of Venezuela were the result of a Central American wave of influence. This theory is plausible but is based on little evidence. Spinden said: [87] "The statement has already been made that the figurines found in the eastern Andes resemble closely those of Central America. This might be made stronger and the conclusion brought home that the plastic art of Venezuela is one and the same with the 'archaic' art already known in Mexico and Central America. . . . To be sure we must always stand ready to evoke the doctrine of divergent development but with a knowledge of transitional types the very fact that an orderly and systematic change is to be observed makes stronger the proof of cultural dissemination. In Mexico and Central America the archaic art was succeeded by other and higher styles. In Colombia some influence from the later culture is manifest in pottery and metal work. But in Venezuela no later inflow has been noted and but slight evidence of independent local uplift."

The above is probably too simple an explanation of the development of Venezuelan culture. There is no doubt that there are many ceramic similarities between Venezuela and Central America, but the soundness of the "archaic" theory in its culture bearing aspects has been so ably questioned [88] that the presence of "archaic" elements in Venezuela means simply that such elements made their way there at some time. Furthermore, figurines are lacking in the earliest phase yet known at Lake Valencia, and it is here, in the Valencia Phase and in the Andes, that figurines present the most striking "archaic" similarities in style of modeling, especially eye form.

It seems, also, that the absence of the metate-mano complex in Venezuela is significant in a general consideration of Central American cultural origins for the area. This is an "archaic" trait and one which has a wide distribution throughout Central America; yet I know of no true metates nearer to Venezuela than those of the Santa Marta region,[89] where they are of simple, legless form; a few similar metates have been found in the San Agustin region of Colombia also.[90] There is no doubt that maize was in use in Venezuela, and it would seem likely that maize growers bearing the elements of Central American culture would retain the metate.

Even if it be true, which it may be, that every element of higher culture was brought to Venezuela from Central America, there is, as yet, no proof that any of them came thence directly. It is probable that many of the traits in Central America, usually recognized as South American, were introduced by populations on their way north and west from the southern continent. Similar influences could have been at work in Venezuela; there is absolutely no basis for the assumption that whatever elements indicate *connections* with Central America were introduced *directly* from there.

It is due primarily to this assumption that Briceño-Iragorry sees the direct influence of the Maya in Venezuela, expressed in Andean pottery. He even goes so far as to say [91] that the alligator vessel (pl. XIII, *37*) from the Cave of Santo Domingo, near Carache, "is essentially Maya in style" corresponding to "similar ceramics excavated at Chichen-Itza."

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[85] Briceño-Iragorry, 1928, 1929; Jahn, 1927, p. 321.

[86] Spinden, 1916.

[87] Spinden, 1916, p. 327.

[88] Lothrop, 1926, vol. 2, pp. 400–404.

[89] Mason, 1936, p. 143, pls. 66, 67.

[90] Lunardi, 1935, fig. 34.

[91] Briceño-Iragorry, 1929, p. 180.

If one can draw serious conclusions from such a comparison, it is easy to link with it the evidence from bat forms in stone (broad-winged ornaments) and evolve them from the Bat God of the Maya, as Briceño-Iragorry has done,[92] probably largely influenced by Giglioli.[93]

Another over-simplified analysis of Venezuelan culture has been published by Uhle.[94] Lake Valencia pottery is, he states, a degeneration of the "alligator" ware of Chiriqui, and he cites some comparative details of modeled decoration, implying again that the direction of this influence was directly from Central America. There are, of course, general and even some specific analogies between Valencia Phase wares and those of Chiriqui, but there can certainly be no justification for the statement that Lake Valencia culture is represented by *degenerate* "alligator" ware. There is, again, actually no proof that Chiriqui modeled pottery was not the result of influences from South America which may, for all we know to the contrary, so ignorant are we of the details of the archaeology of this part of the world, have given rise to "alligator" ware and Valencia Phase ware at the same time.

The Venezuelan area regarded as a whole cannot readily be evaluated archaeologically, on account of the paucity of comparative material from nearby areas and particularly the lack of chronological data over considerable parts of the whole region. Furthermore, archaeological phases cannot be linked with linguistic groups with any real certainty, although it would appear that most of the remains are Arawakan. External comparisons indicate connections with such widespread areas, and local elements may be so conflicting in their indications of direction that one soon feels that Venezuela must have been a veritable cultural crossroads.

The best method of indicating resemblances outside the political limits of Venezuela seems to be to consider the various major archaeological areas in turn, as was done when internal relationships were discussed.

## *WESTERN VENEZUELA*

### Carache, Falcon, the Dutch Islands and the Maracaibo Basin

The Carache, Falcon, Curacao, Aruba and Bonaire material, plus that from Punta de Leiva, forms a fairly close-knit group. Burial methods are varied, but secondary urn burial occurs in Falcon, probably on the islands and at Punta de Leiva. Nordenskiöld indicates[95] the distribution of urn burial of various types. Since Linné's[96] additions to the list there has been no significant expansion of the known distribution. It will be noted that Nordenskiöld indicated primary urn burial as characteristic of large parts of Venezuela, on Spinden's authority. As I have pointed out above, there is evidence for secondary urn burial in several places, but beyond Spinden's statement, implying primary urn burial, I have not been able to find evidence for this method of burial excepting on Aruba and for infants at Lake Valencia.

The custom of secondary urn burial is widespread, occurring in the Amazon drainage, the Guianas and Venezuela, as well as on the Colombian coast, including the Goajiro Peninsula. In the Antilles true secondary urn burial is very rare but has been found,[97] apparently, in Puerto Rico and Santo Domingo, more certainly in Jamaica. Secondary disposal in other ways was not uncommon.

It also has a scattered distribution in North and Central America. In Venezuela it was, apparently, never the sole method of disposing of the dead but was often by far the most usual. It has been regarded as a South American trait,[98] largely because of its distribution, which certainly indicates this without, however, proving it. Distribution alone seems to point to the lower Amazon as a center of dispersal of the trait; if this is so it must have required some time to spread over such wide areas as it has, although it has never been found under conditions which indicate great antiquity. Lake Valencia is the only place I know of where secondary urn burial is to be found in direct stratigraphic relationship with direct primary burial, showing that there, at least, it is later. We cannot, then, be sure where the custom originated, nor exactly how its use spread.

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[92] Briceño-Iragorry, 1928.

[93] Giglioli, 1910.

[94] Uhle, 1923, p. 3.

[95] Nordenskiöld, 1920, map. 16.

[96] Linné, 1929, p. 214.

[97] Loven, 1935, p. 552.

[98] Linné, 1929, p. 252.

There are two other unusual methods of disposal of the dead reported in the old accounts from the north coastal area but which have not been, and probably never could be, corroborated archaeologically. These are endo-cannibalism and drying of the body of a chief over a fire, a sort of mummification. Both are said to have been practiced by the Caquetio,[99] the Arawak people of this area, to whom it is probably reasonable to ascribe the archaeological pottery of Falcon.

Linné has mapped the distribution of these practices.[100] Endo-cannibalism is almost wholly confined to South America, particularly the upper Amazon region, and is altogether northern in its continental distribution. Furthermore, it does not seem to have spread into Central America, although it is known from the Lesser Antilles, and there is one record of it from the Gulf coast of the southern United States. There seems to be little doubt that this practice is of South American origin; Linné feels it to be of considerable antiquity.

Mummification by fire drying was practiced from Costa Rica to the Amazon, as well as in the Greater Antilles and sporadically on the west coast. Linné [101] feels that the northern distribution of the custom, also reported in Venezuela from the Paria region, had its origin in Colombia, but there is actually no evidence other than that of distribution in favor of this hypothesis. Probably correctly, he hesitates to proclaim the trait a Central American one, the usual practice of those who have been concerned with Venezuelan prehistory. This necessitates the assumption that its presence in Costa Rica and Panama is due to the influence or migration of Chibcha-speaking Indians, which seems reasonable. Such mummification in Venezuela need not be explained in the same way, however.

The ceramic relationships of the north coastal material, with the exception of Carache, have been commented upon. Nomland [102] has pointed out many analogies with the Dutch Islands, which have been mentioned above, and with southern Central America and the Antilles.

Relationship with cultures to the west of Venezuela seems apparent, expressed by the presence of annular bases, leg-ring bases, tripod vessels, the use of paint in geometric decoration and details of modeled decoration. Nomland refers to Holmes,[103] MacCurdy,[104] Lothrop [105] and Linné [106] in the course of her descriptive writing, stressing the fact that Coro wares are more closely related to those of the Colombian lowland areas studied by Linné than to those of other areas. She sums up her remarks on Coro with the statement [107] that it is to Colombian coastal deep-level grave material and to Chiriqui black incised ware that the Coro material is most similar, suggesting that Coro may represent an earlier cultural level. However, references to Linné are for comparison with material most of which did not come from such graves. She concludes [108] that Falcon archaeology, with the exception of Coro, shows its closest relationships to that of the Dutch Islands, southern Central America and the Antilles.

Vessels with unsmoothed neck corrugations, found in Falcon, the Dutch Islands and Punta de Leiva, but lacking at Carache, seem more closely related to similar pieces from San Agustin [109] and the Atlantic coast of Colombia [110] than they do to the type of corrugated ware, which apparently originated in the Guaraní area.[111]

Carache exhibits many features in common with the coastal group, and resemblances to the same outside areas may be noted. The annular base has an extremely wide distribution throughout Central America, northwestern and far western South America, with scattered occurrence in the Amazon Basin.[112] Its occurrence in all parts of Venezuela represented by collections of any size, excepting Margarita, places it on a direct line of diffusion from the mainland to the Antilles. From the distributional and historical evidence, it does not seem possible that this type of vessel support could have had its origin outside of one of the areas of higher culture, as Linné points out,[113] as well as the fact that its distribution corresponds with other elements of higher culture.

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[99] See above, p. 14.

[100] Linné, 1929, maps 14, 15.

[101] Linné, 1929, p. 236.

[102] Nomland, 1933, 1935.

[103] Holmes, 1888.

[104] MacCurdy, 1911.

[105] Lothrop, 1926.

[106] Linné, 1929.

[107] Nomland, 1935, p. 23.

[108] Nomland, 1935, pp. 75–77.

[109] Pruess, 1929, Abb. 76–85.

[110] Linné, 1929, fig. 9.

[111] Nordenskiöld, 1919, pp. 217–218, map 40; Lothrop, 1932, pp. 132–134, pls. IV, V.

The leg-ring base, which occurs throughout western Venezuela, on the Dutch Islands, in the La Cabrera Phase and possibly on Trinidad, has a very much less widespread distribution. From the evidence at hand it would appear that this type of base is actually more common proportionately in western Venezuela than it is in any other area where it occurs. It is not common, for instance, in the Colombian highlands, the first area from whence one might expect to be able to trace its influence in Venezuela. I know of only a single specimen,[113a] from the Cauca Valley, a low leg-ring base carinated bowl not unlike the central Lara example shown in pl. XVI, *1*. From lowland Colombia, on the coast of the Gulf of Uraba, several low leg-ring specimens were found by Linné.[114] West of this point they were rare; MacCurdy[115] illustrates a leg-ring base bowl from Chiriqui which he refers to as a "unique form." This is a true leg-ring support, but the legs are "Atlantean" in "half-human forms."

Atlantean supports are described by Lothrop[116] from Costa Rica; some of these are in the form of free supports; Lothrop says that "A second form occurs in which the figures rest on a circular ring of clay, a conception obviously borrowed from the stone stools and stands. This type cross cuts the wares as described in this work." I see no reason for postulating the borrowing of the idea of leg-ring or Atlantean supports from stone work. The opposite may have been equally true. Elsewhere in Central America the leg-ring base must be exceedingly rare, if present at all. It does occur in the Mississippi Valley, however.[117] To the east and south, Santarem, Brazil, appears to be the only locality which has produced analogous basal types,[118] although these "caryatid" supports are not leg-ring bases at all, strictly speaking, since the "caryatids" connect the bowl to an hour-glass-shaped base below. On the basis of this distribution, there does not seem to be any very good evidence that the leg-ring base is a Central American trait. Its common occurrence in western Venezuela is possibly not indicative of local origin, since its frequency and age in Costa Rica may be greater than appears to be the case. It is certainly an indication of relationship between Venezuela and the Isthmian region, however.

Tripod vessels, although their presence is not absolutely certain in Falcon and on the Dutch Islands, almost certainly occurred at Carache. Their use was also widespread in the Venezuelan Andean and Lara regions. Linné's distribution map[119] shows that this form of vessel is exceedingly common in Mexico and Central America, as well as in western South America, especially in the highlands of Ecuador and in the Mojos area of Bolivia. It is rare on the north coast of Peru but occurs to some extent in the northern highlands. In the Colombian highlands it is not especially common, probably not as much so as in the Andes of Venezuela. In the lower Amazon, tripods occur archaeologically only at Santarem, and there rarely. All the implications of this distribution point to a western origin, especially as the trait is also present in the Mississippi area. The Venezuelan types of solid and hollow tripod legs are both common in the greater Andean area. "V"-shaped solid legs, so common in the Venezuelan Andes, are not uncommon in the Ecuadorean highlands,[120] probably dating from late times.

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[112] Linné, 1929, map 6; Palmatary, 1939, pp. 108–110.

[113] Linné, 1929, p. 106.

[113a] The Cauca Valley specimen, of which there is a photograph in the Peabody Museum, formed part of a collection sent to the Madrid Exposition of 1892 by the Colombian Government.

[114] Linné, 1929, figs. 2, b; 6; 7, e.

[115] MacCurdy, 1911, pl. 41, f.

[116] Lothrop, 1926, vol. 2, p. 339; for true leg-ring base types see vol. I, fig. 98, d; vol. 2, figs. 250, 251.

[117] Vaillant, 1932, pl. 3, nos. 8, 9.

[118] Nordenskiöld, 1930, pls. 27; 28, a. Palmatary (1939, pp. 77–87) discusses the caryatid and columnar support on a ring base (leg-ring base), concluding that the latter is not an Amazonian characteristic.

[119] Linné, 1929, map. 7.

The virtual lack of tripods in the Valencia Phase and their rarity [121] farther east in the Antilles is comparable to the concomitant lack of the leg-ring base in these areas, while the simple annular base covered a very much wider region. This undoubtedly indicates a western origin of the tripod, but its antiquity and origin are certainly still in doubt. There is no real evidence for its relative antiquity in Venezuela, since its occurrence in the La Cabrera Phase is likely but far from certain. If it was used in this phase, its age in Venezuela would be fairly considerable but not necessarily greater than that known from many other areas.

The painted design of north coastal, Carache and Venezuelan Andean pottery displays certain very generalized analogies with that of other regions, chiefly to the west. Painting is very rare on the Colombian north coast, as far as is known at present, but there is a use of lunes in panels on the rare Santa Marta painted ware comparable to that of some western Venezuelan vessels.[122] Highland Colombian lost color styles do not appear closely related to Venezuelan painted styles. From Chiriqui there are lost color, red line and "alligator" ware geometric motifs in bands and panels which recall Venezuelan designs. Many of these [123] show bands or panels containing opposed triangles or trapezoids, set off by heavy and sometimes thin lines as well, in close approximation to Carache and north coastal styles. Strikingly similar red painted designs occur at San Agustin, Colombia.[124] Lothrop points out [125] that patterns based on the chevron, many of them generally similar to northern Venezuelan examples, have a wide distribution in South America as well as in Central America.

Comb elements are rare from sites other than Carache, except to indicate feet or hands in ware which otherwise shows no relationship to Carache Red on White.

Spirals are found in the Colombian highland painted wares,[126] but their use to fill the base of a bowl in the Carache manner is not found in neighboring South or Central American areas. The use of the spiral on Crab Culture (Cuevas type) ware from Puerto Rico is more similar to that of Carache than any others I have observed.[127]

On the whole, the north coastal and Carache painted styles, and probably the Andean as well, which are essentially the same in plan, must be considered as local developments. This is strengthened by the absence of the lost color technique, so characteristic of the Colombian and Ecuadorean highlands, as well as of southern Central America, and the rarity of painted design on Colombian north coastal wares. Lack of chronology is, of course, a stumbling-block in the demonstration of the hypothesis, but none of the painted wares under consideration appear to have been very early. If there had been a marked influence from the western highland area one might expect to find in Venezuela not so much a specific likeness in design elements, which are notoriously subject to local changes, but a continuation of the basic technique employed, for instance, either in the Colombian lowlands or on the north coast. Such not being the case, the question of the introduction of painted design must remain in doubt.

Modeled decoration, rather rare at Carache, more common in Falcon and on the islands, exhibits both western and eastern relationships. The use of wavy appliqué strips, usually punctate, primarily a Carache trait, is found in Costa Rica,[128] Puerto Rico [129] and

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[120] Jijon y Caamaño, 1927, pl. 93, no. 4.

[121] Palmatary (1939, p. 111) notes tripod vessels from Barbados. Hitherto, they have been unknown from the Antilles.

[122] Compare Mason, 1939, fig. 23, pl. 215 with fig. 462, b above.

[123] MacCurdy, 1911, figs. 186, 187, 237–239, pls. 36, a, 37, a, 39, a, 40, d.

[124] Preuss, 1929, Abb. 122–133.

[125] Lothrop, 1932, p. 142.

[126] Seler, 1893, pl. 52, 17–20; also Peabody Museum specimens.

[127] Compare Rainey, 1940, fig. 6, 1 and pl. 2 with fig. 377 above.

[128] Lothrop, 1926, figs. 239, b, 241, c.

[129] Rainey, 1940, p. 23, pl. 1, 8.

Santarem.[130] Strips which are not wavy, but short, vertical or horizontal, are found in Costa Rica,[131] Panama,[132] the eastern Colombian highlands[133] and, as has been pointed out, on Valencia Red type pottery.

The addition of modeled figures, in the shape of frogs, lizards or animal forms of uncertain species, to the walls or shoulders of vessels is a very widespread trait, occurring throughout northern and western South America, especially Colombia, southern Central America and the Antilles, as well as in parts of the Amazon area, especially Santarem. Little of the Carache, Falcon or Dutch Island modeling is closely comparable to this material, although some Falcon frog representations are, as are those of the La Cabrera Phase. Wassén[134] has traced the frog motif throughout South America. He believes that the Colombian area is a focal point in the distribution of the modeled frog representation.[135] It is to frogs from the Cauca Valley,[136] the northern Colombian coast[137] and Chiriqui[138] that the Venezuelan examples from all areas appear most similar. The Venezuelan specimens recently brought to light fill a gap indicated by Wassén in the distribution of the modeled frog.

Modeled eyes are usually round rather than coffee bean in the north coastal, island and Carache group, presenting both western, eastern, Amazonian and Antillean analogies. Nomland points out[139] that round eyes are common in Costa Rica and Chiriqui; they are also abundant at Santa Marta.[140] It has been noted that the round eye is common in central and eastern Venezuela. British Guiana adornos, very few of which are illustrated in the literature, are also characterized by round eyes,[141] both pitted and unpitted. The unpitted eye, usually surrounded by a ring of clay, a form which does not occur at Carache and is very rare at Lake Valencia,[142] is the usual middle Amazonian type.[143] This is also rare from Trinidad and rather rare, apparently, from British Guiana.

However, this form of eye (Palmatary's "round-rimmed protuberant") is not uncommon in Falcon and Dutch Island modeling, where it is in sharp contrast to the usually deep pitted "doughnut" eyes of the late Greater Antillean phases.[144] Palmatary[145] notes that pitted eyes are rare in the Amazon area, more frequent as the Greater Antilles are approached. She suggests that the pitted round-rimmed protuberant type, sometimes found at Lake Valencia (pl. X, *15–17*), may be transitional between the usual Antillean and Amazonian round eye types. This seems plausible on the basis of geographic distribution, although Falcon and Dutch Island forms are apparently more closely related in this respect to the Amazon.

Carache, displaying plain pitted nodes, deeply pitted doughnuts (though rarely) and unpitted, unrimmed forms, seems much more truly transitional typologically. The preponderance of pitted nodes among Valencia Phase round eyes, added to the pitted rimmed types, appears to strengthen Palmatary's hypothesis of transition. However, the typological transitional form may not necessarily imply a cultural transition from Amazon to Antilles. Further studies of eye form distributions, possibly based on more refined classification than has been attempted by Nomland, Palmatary and myself, would be of considerable interest, although quantitative data are largely lacking or insignificant.

Spouted vessels are rare in the group of wares under consideration; they are apparently lacking at Carache. The double spout without connecting handle, of the type found at Punta de Leiva (fig. 54), and similar specimens from Falcon, is probably western in origin but is a rare form; I can find no identical counterparts from neighboring areas, although the spout is a well known Central American trait. Single spouted vessels are present but rare at Santa Marta.[146]

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[130] Palmatary, 1939, fig. 35.

[131] Hartman, 1901, vol. 2, pls. 5, no. 6, 6, nos. 3, 5, 7, no. 7, 8, no, 4, 16, no. 6, 20, nos. 4, 13, 15, 21, nos. 2, 11, 22, no. 8, 25, no. 8, 26, no. 5, 27, no. 2, 33, no. 2, 45, no. 5, 57, no. 6; Lothrop, 1926, vol. 2, figs. 229, 234, 235, 241, b, pl. 180.

[132] MacCurdy, 1911, fig. 134; pl. 24, d, f.

[133] Rochereaux, 1920, p. 55–63, fig. 2, no. 1.

[134] Wassén, 1934.

[135] Wassén, 1934, p. 360.

[136] Wassén, 1934, table 2; fig. 29.

[137] Linné, 1929, fig. 2, b.

[138] MacCurdy, 1911, figs. 98–100; pl. 14.

[139] Nomland, 1935, p. 10.

[140] Mason, 1939, plates.

[141] Roth, 1924, pl. 25, and also many illustrations in Roth, 1930 (ms.).

[142] There are no examples in the Los Tamarindos collections.

[143] Palmatary, 1939, pp. 63–65.

[144] Nomland, 1935, p. 10.

[145] Palmatary, 1939, p. 67.

Griddles, not uncommon at Carache, rarer in the north, common at Lake Valencia, especially in late times, as well as on Margarita and Trinidad, may have been used in the other parts of Venezuela from which we have such sparse collections. Linné's map[147] shows a decidedly eastern South American distribution, with extension into the Antilles. None have been found in southern Central America. They are apparently unknown from Colombia, with the exception of Linné's own find at Garachine on the northern coast of the Isthmus. The presence of flat griddles or dishes of this sort is probably connected with the use of manioc; on the basis of distribution there seems to be no connection between South American examples and "comales" of the Maya and Mexican cultures.

Stamps, both flat and cylindrical, are known from Aruba, but not definitely from Falcon, and none were found at Carache. Cylindrical stamps have been found, rarely, at Lake Valencia, probably from the Valencia Phase. Linné shows[148] that flat stamps have a considerable distribution over South America and the Antilles, as well as over Central America and southeastern North America, but that cylinder stamps are far less common.[149] Lake Valencia is the easternmost point which has produced any of these objects archaeologically; their distribution is continuous from southern Mexico to northwestern South America. They are very rare in the Greater Antilles.[150]

In stone work the Dutch Islands and Falcon show close similarities; there is nothing in the stone tool material which suggests anything but broad, general relationships with other areas of northern South America and the Antilles. It is probable that the Carache people used stone axes, though inexplicable why none were found. It may be repeated that none of the worn slabs from Carache and none of the Falcon "mullers" can be termed metates, since none show wear in characteristic metate fashion.

### ANDEAN REGION

Some of the aspects of the Venezuelan Andean region have already been discussed, namely, such features of vessel structure as the annular base, the leg-ring base, the tripod support, painted and modeled decoration in general.

Since there are no reliable representative archaeological data for Venezuelan Andean culture, it must be evaluated impressionistically for the present. Certain features, some little known but undoubtedly present, combine to produce the impression of strong western influences, tempered by strong local developments. The presence of so many stone walls, many of them probably very old, and evidence of terracing for agriculture point generally to southern Andean relationships.

Burial, as noted above, is variable, but apparently always direct and primary; mummies have been found, but there is no evidence that preservation was due to anything but conditions in the caves or artificial tombs in which the bodies were left. Spinden reports[151] urn burial from near Valera and Merida, neither of which are in the true highlands. I have no other evidence that urn burial occurs in these areas.

There is fairly good evidence that deep-level graves were used, at least in certain parts of the area (fig. 50). The distribution of deep-level graves has been mapped by Linné;[152] scattered sporadically through Central America from the Totonac region south and east, they are concentrated in Colombia, Ecuador and on the west coast as far south as Tacna, with a few in the Diaguite area. A single isolated find of deep-level graves was made by Goeldi[153] at Counany in Brazilian Guiana.

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[146] Mason, 1939, p. 344.

[147] Linné, 1929, map 9.

[148] Linné, 1929, map 3.

[149] Linné, 1929, map 4.

[150] Wassén, 1934, p. 649.

[151] Spinden, 1916, p. 327.

[152] Linné, 1929, map 13.

[153] Goeldi, 1900, figs. 1 and 2.

With this exception, the deep-level graves discovered by Rochereaux[154] in the Pamplona region of eastern Colombia, where he found a desiccated body as well as skeletons, are the farthest east on Linné's map. Their occurrence in western Venezuela may well indicate some Colombian influence.

The most striking feature of Venezuelan Andean culture to be seen in collection material is the complex of male and female figurines.

Female figurines are widely distributed throughout Middle and South America. Venezuelan specimens are never mould made, always modeled by hand. The most similar Central American figurines are of the spread-legged seated female type, found in Nicaragua, Costa Rica[155] and Chiriqui.[156]

On the north coast of Colombia female figurines are rare; I know of none with the exception of an apparently spread-legged type recently brought to the Peabody Museum from Santa Marta and the few specimens noted by Mason.[157]

The Colombian highlands, especially the Cauca Valley, have produced a number of figurines, many of them female, probably representations of the goddess Bachue. These may be seen in museum collections (Peabody Museum, the American Museum of Natural History, Museum of the American Indian, Heye Foundation); some have been illustrated.[158] Heads are quadrangular or rounded, eyes are usually low coffee bean types; with long slit, never as protruding as those of Venezuelan specimens from either the Andes or Lake Valencia. Both standing and sitting types are represented.

Andean Venezuelan female figurines are very similar to those of the Valencia Phase, but the Aruba specimens, apparently rare, although comparable in head form and having coffee bean eyes, are not comparable in body structure. The only whole specimen is legless.

The distribution of female figurines east of Lake Valencia extends as far as Marajo Island, at the mouth of the Amazon. Specimens have been illustrated from Marajo Island,[159] Santarem[160] and the lower Amazon area in general,[161] as well as from lowland Bolivia.[162]

British Guiana figurines[163] are rare, not certainly female, but may well be. There are also female representations on some curious effigy urns depicting figures seated on stools with hands on knees from Maraca, in Brazilian Guiana,[164] but most of these are male.

Palmatary[165] discusses the wide distribution of the crescent-based figurine (spread-legged type), most of which are female. She notes their abundance in the Chiriqui-Costa Rica area and the middle Mississippi Valley, as well as their occurrence on the Amazon, in Venezuela, rarely in Colombia and in Hispaniola (as effigy vessels). It is of interest that no standing female figurines are present in the Santarem collections analyzed by Palmatary. It would seem that the association of the standing and seated spread-legged, or crescent based, types was most usual in the Lake Valencia region and the Venezuelan Andes, with lower Central America, Colombia (particularly the Cauca Valley area) and the Amazon characterized by the preponderance of only one type in each area. However, most of these relative frequencies are quite untrustworthy and should be used cautiously in drawing conclusions.

The chronological evidence from Lake Valencia points in general to a late occurrence of both types, with the spread-legged following the standing form. It would be premature, however, to conclude that this was of more than local significance.

Male figurines from the Venezuelan Andes are almost invariably seated upon stools, and usually the figure holds a bowl. The type seems to be commoner in this region than elsewhere, but this may be due to the fact that the Colombian highlands have never been systematically studied. Distribution of male figurines or male effigy vessels seated upon stools is wide, but the bowl in the hands is not common. Costa Rica [166] seems to be as far west as the stool seated figurine is to be found, of type comparable to Venezuelan specimens.

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[154] Rochereaux, 1920, pp. 55–63.

[155] Lothrop, 1926, vol. 2, figs. 148, 152, 153, 268, pls. 125, 126, f, 191, a–c.

[156] Holmes, 1888, figs. 226–229; MacCurdy, 1911, figs. 265–266.

[157] Mason, 1939, p. 380.

[158] Uhle, 1889, pl. 1, no. 7; Seler, 1893, pl. 56, nos. 10–15; Thompson, 1936, pl. 8.

[159] Netto, 1885, pp. 316, 326, pl. 4, no. 31; Goeldi, 1900, plates illustrating pottery from Brazilian Guiana and Marajo, 2nd set, pls. 1, 3.

[160] Nordenskiöld, 1930, frontispiece and pl. 35, a; Palmatary, 1939, figs. 40, 41.

[161] Netto, 1885, pl. 3, nos. 3, 10, 11.

[162] Nordenskiöld, 1913, figs. 45, 86, 115, 116.

[163] Roth, 1924, fig. 35.

[164] Goeldi, 1900, 1st set, pls. 2, 4.

[165] Palmatary, 1939, pp. 68–76.

In the Cauca Valley a large number of male figurines have been found, both standing and sitting types; these usually have broad quadrilateral heads like those of the Venezuelan Andean female types, and the hands are often extended. Many are painted in lost color (Peabody Museum, the American Museum of Natural History, Museum of the American Indian, Heye Foundation). Specimens seated upon four-legged stools must be rare, since they are seldom seen in collections which contain many standing and normally seated types. There is only one definitely male figurine seated on a four-legged stool of the Venezuelan type, in the large collection of Cauca Valley material sent to Madrid in 1892. There is a single specimen on exhibition at the Field Museum, Chicago. Seler [167] illustrates only three, Lunardi,[168] four. The latter are large (50 cm. in height), more comparable to specimens from Brazilian Guiana and lowland Ecuador than to those of Venezuela. A single Santa Marta specimen may be "non-Tairona.[169] The true stool seated male figurine may well be more common proportionately in Venezuela than in Colombia.

Bowls in the hand are also rare from Colombia but may occasionally be seen on figurines or small effigy vessels, usually of doubtful sex. Farther south a bowl is commonly borne in the hands of modeled figures on vessels from the Recuay, Ancon and Chancay cultures of Peru.

Ecuadorean specimens are also rare, but do occur, both in the highlands [170] and the coastal region.[171] These are presumably male figures, but sex is not exaggerated as it is in the Venezuelan specimens. Nordenskiöld [172] illustrates a large effigy urn, representing a seated male figure with hands on knees, from the Rio Napo, in lowland Ecuador, and the same motif has been noted at Santarem.[173] Similar to this, but from much farther east, are some large stool seated urns from Maraca,[174] in Brazilian Guiana, also definitely male. Some are painted (the pottery of this region is often painted in a style closely resembling that of Marajo Island).

From Santo Domingo Fewkes [175] illustrates a large (3-foot) wooden, male figure. Although not seated on a stool, the bent knees suggest that it formerly was so seated. The serrated spine is prominent, recalling those of many Venezuelan Andean and Amazonian specimens. A second figure [176] in clay, of unknown sex, seated on a stool, and with the spine marked in the same way, is also from Santo Domingo. Such objects seem to be rare from the Antilles and could conceivably represent imports.

This distribution does not cover as wide an area as does that of the female figurine, and the true male figurine, seated on a stool, seems to be confined fairly closely to Colombia and Venezuela and may possibly have originated in Venezuela. The culture of the Colombian highlands, however, was apparently so much further advanced, especially in the use of metal, and has been relatively so much better known from historical sources, that its position in regard to Venezuela has always been considered to be that of the giver, rather than the receiver, of cultural elements. So, although there is no more evidence for early basic cultures in Colombia than there is in Venezuela, all those who have hitherto concerned themselves with Venezuelan archaeology look to Colombia and the west for origins. This is the obvious procedure, but upon examination of what little is known of Colombian archaeology, it is often an unsatisfactory one.

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[166] Lothrop, 1926, vol. 2, figs. 155, 263, b.

[167] Seler, 1893, pls. 53, no. 14, 54, nos. 8, 9.

[168] Lunardi, 1935, figs. 73–76.

[169] Mason, 1939, pl. 247, 1–3.

[170] Jijon y Camaño, 1920, pl. 41.

[171] Saville, 1910, pls. 86, 87, 88.

[172] Nordenskiöld, 1930, pl. 54.

[173] Palmatary, 1939, figs. 3, 4.

[174] Nordenskiöld, 1930, fig. 9; pl. 18; Goeldi, 1900, 1st set, pls. 1, 3, 4, 9, 10.

[175] Fewkes, 1907, pl. 110, C–C″.

[176] Fewkes, 1907, pl. 82, A.

There can be no proof of any of the current theories of western origins until there is a time scale to back up impressions which admittedly are very strong.

It is too soon to force conclusions from the distributions, and often questionable associations, of the male and female figurines. The spread-legged female and stool-seated male types each suggest a single origin and the possible diffusion of definite concepts or even cults, but their further historical significance is not yet clear.

The presence of tetrapod vessels, many of them effigies, in the Venezuelan Andean area seems to indicate a Central American and Colombian relationship. Somewhat similar objects have been found in Costa Rica;[177] at Santa Marta tetrapods occur to the exclusion of tripods,[178] and some are animal effigies. Elsewhere in Colombia tetrapod vessels are not uncommon.[179]

One of the most interesting manifestations of Venezuelan Andean culture is the presence of large numbers of broad-winged ornaments, both in stone and shell. Their distribution within Venezuela, present but rare in the east, and possibly traded there, has been discussed. One can search in vain for such objects in the central Colombian highland area, both in the literature and in museum collections. Broad-winged ornaments seem to occur only in the Santa Marta region, where they are abundant.[180] They are comparable in general shape and size to those of Venezuela but are all drilled and are usually thicker. Another feature which many of them share with Coclé, Panama,[181] agate specimens of similar style, is the single hole, drilled laterally through the central projection parallel to the long axis of the object, rather than through it, below the projection. Actually, none of the Santa Marta or Coclé specimens have the characteristic triangular central projections which distinguish the Venezuelan ornaments of this type. Mason states that similar objects are found in Central America, especially on the Pacific coast, which includes Coclé, and that specimens almost identical to those of Santa Marta have been found in Guerrero and Oaxaca, Mexico. Lothrop noted their occasional occurrence in the Antilles as far as Puerto Rico.

There is another type, apparently very rare in the Andes of Venezuela, of which only one specimen has been illustrated.[182] It is a far more certain representation of a bat than the usual type of broad-winged ornament, having a face with ears and upturned nose. The wings are round. One specimen illustrated by Mason[183] is identical, including the presence of a tube-bored circle below the head on the small body. There are two other specimens, identical but for the fact that the wings terminate in rounded knobs instead of tapering. One comes from Santa Marta (Peabody Museum), the other from the island of Caiguire in Lake Valencia,[184] where it was found by Jahn. This distribution of specimens which resemble each other in every detail, found in Venezuela and Santa Marta, is probably evidence of trade, since it is doubtful that these objects were made in more than one rather small area. There are no means of determining whether Santa Marta, the Venezuelan Andes or some intermediate point was the place of manufacture.

The small stone figurines and amulets found in the Venezuelan Andean region are often very probably conventionalized frogs as well as human representations. Objects of this sort, especially frogs, have a considerable South American distribution. Wassén,[185] in his work on the frog motive in South America, has called attention to the widespread occurrence of the *muirakitas*, or green stone amulets, in frog form.[186] They are especially common in the lower Amazon area, where in body shape and incising they are comparable to Venezuelan stone and shell specimens, but where the heads are usually somewhat more naturalistic. Venezuelan frog amulets occur not only in the Andes, but in Lara and in Lake Valencia Phase deposits as well, but appear especially common in the Andes. Wassén states [187] that such frog amulets in Amazonas have their closest parallels in Venezuela and Central America, reference being made to De Loys' Andean stone amulets [188] and those illustrated by Von den Steinen from Lake Valencia.[189] From the Nicoya Peninsula Hartman [190] has published similar small stone figures, pierced for suspension as these objects almost invariably are.

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[177] Lothrop, 1926, vol. 1, fig. 21; vol. 2, pl. 115.

[178] Mason, 1939, pp. 339, 341.

[179] Thompson, 1936, p. 140, pl. 9.

[180] Mason, 1936, p. 179, pls. 85–91.

[181] Lothrop, 1937, p. 163, pl. 3.

[182] Briceño-Iragorry, 1928, pl. 2, b.

[183] Mason, 1936, pl. 90, no. 1.

[184] Von den Steinen, 1904, fig. 2.

[185] Wassén, 1934, pp. 336–344.

[186] Wassén, 1934, figs. 13, 14.

Venezuelan *muirakitas* figures often appear to be human headed, with the characteristic frog bent knees and feet. Almost identical stone amulets from Puerto Rico (Peabody Museum) resemble the Venezuelan Andean human headed and doubtfully headed specimens more closely than do any from other areas outside of Venezuela. Wassén believes that the *muirakitas*, hitherto said to be of Antillean origin,[191] either reached the islands by trade or were mixed with collections from the Amazon. However, the half dozen Puerto Rican specimens in the Peabody Museum were definitely found on that island, although they could have reached there in trade.

### LARA

The Lara area exhibits several elements which have so far not been considered. Those which seem to be confined to this region, although they may well occur in other parts of Venezuela as yet unknown, are the pot-stand and stirrup-spouted vessel.

Pot-stands are not uncommon in Central America but in South America were widely used only in the Amazon area.[192] It has been noted that stands were found in Trinidad, on the east coast of the island. There is probably a continuous distribution of pot-stands throughout northwestern South America from Amazonas into Central America, but obviously these objects are not very common.

The stirrup-spouted vessel found in Lara (pl. XIV, *6*) is puzzling, since this is the only specimen I know of from anywhere in the region. However, the form may eventually prove more frequent here. It is a well known feature of Peruvian north coastal culture from early to late periods but is very rarely found in Central or North America. Santa Marta has produced a few stirrup-spouted vessels,[193] and they were probably present in the Cauca Valley, although apparently very rarely. A single crude specimen occurs among the photographs in the Peabody Museum of Cauca material sent to Madrid in 1892, and I know of no others from the area. This distribution is perhaps suggestive of Peruvian influences in western Venezuela but is scarcely conclusive.

## *CENTRAL VENEZUELA*

### LA CABRERA PHASE

Some similarities between the material from Lara and that of the La Cabrera Phase have been noted above and such elements of pottery style as the leg-ring base, the annular base and modeled decoration in general have been discussed.

The La Cabrera Phase also exhibits the double spout with connecting handle, also present to some extent in Valencia Phase collections. For this there is a sporadic distribution suggestive of western and southern Andean origin. Spouts from Lake Valencia are never thin and tapering, nor are those of the only other Venezuelan specimen I know, a piece in the American Museum from San Fernando de Apure. However, Colombian vessels have been found,[194] usually high necked jars, fitted with two short tapering spouts and a connecting handle in exactly the same manner as those of Lake Valencia. Wassén [195] points out that this type of spout with handle is a Peruvian trait and that its occurrence in Colombia is apparently pretty closely confined to the Cauca Valley. Between Colombia and Peru a few samples of the type have been recorded from the coast of Ecuador,[196] although it is doubtless not uncommon in the area. The form, with long, tapering spouts and a flat connecting strap, is so well known from the Peruvian coast that its occurrence there requires no comment, other than that it is not a component of the earliest horizons. In southern Central America such spout and handle arrangements are not to be found, and, indeed, double spouts are exceedingly rare.[197]

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[187] Wassén, 1934, p. 342.

[188] Wassén, 1934, table I; fig. 15.

[189] Von den Steinen, 1904, figs. 27, 28, reproduced by Wassén, table I, fig. 11.

[190] Hartman, 1901, vol. 2, pl. 41, figs. 11–14, 17, 19, 20, 23.

[191] Wassén, 1934, p. 340.

[192] Nordenskiöld, 1924, map 14.

[193] Wassén, 1936, p. 38.

[194] Seler, 1893, pls. 54, no. 17, 56, nos. 16, 21; Arango, 1918, fig. 10; Wassén, 1936, figs. 6, a, 7; Thompson, 1936, pl. 9. Double-spouted vessels from Colombia, particularly the Cauca Valley, are to be seen in the Peabody Museum, the Museum of the American Indian and among the illustrations of Colombian material sent to Madrid in 1892, and doubtless in other representative collections as well.

[195] Wassén, 1936, p. 38.

The spout with bridge handle to a head, sometimes found at Lake Valencia, is also a Peruvian trait and has been found in the Cauca Valley in association with double-spouted vessels.[198]

Perhaps the most characteristic form of pottery found in La Cabrera Phase deposits is the elbow pipe. This form of pipe is well known in North America, particularly in the southeast, and occurs exceedingly rarely in Central America. In South America its markedly southern distribution has been recorded[199] and mapped by Nordenskiöld.[200] Outside of Venezuela only a few elbow pipes have been found archaeologically north of the Amazon. Manabi, Ecuador, coast specimens[201] and a doubtfully pre-Columbian example from Santa Marta[202] complete the list. Elbow pipes were not in common use on the Amazon proper, apparently, since only two were among the large Santarem collection analyzed by Palmatary,[203] and these are not assuredly associated with the usual Santarem material. Thus, the Venezuelan examples, chiefly from the La Cabrera Phase, but also apparently in use in Lara and possibly in Falcon, are isolated in this northern area. The knowledge of this distribution is probably what led Von den Steinen to believe that Lake Valencia pipes were post-European, which has been shown to be impossible, at least in the case of the La Cabrera Phase specimens.

The somewhat puzzling presence of elbow pipes may seem more logical in view of Nordenskiöld's opinion[204] that "the pipe . . . presumably belongs to the very old culture elements of South America . . . it is neither Caribbean or Arawakan." This is borne out by its absence in the Guianas and practical absence in the Antilles, where the few specimens which have been found may well have been traded from southeastern North America.[205] If it is true that the pipe is an old element in South America its presence in the older La Cabrera Phase might be explained as a persistence in Venezuela of an old trait which occurred with greatest frequency much farther south. On the other hand, diffusion from the south cannot yet be ruled out as an explanation for the presence of such pipes in the La Cabrera Phase. Association with such presumably western traits as the leg-ring base and legged vessels is difficult to account for if the elbow pipe is thought to have reached Venezuela from Central America for the elbow pipe has left no trace of its passage in the parts of Central America where these elements are common. There is, of course, always the possibility that elbow pipes were developed locally in Venezuela from a simple tubular form.

The apparent similarity of bowls of the La Cabrera Red type to some of the Trinidad specimens has been noted. Incision on this ware is so simple and so poorly represented that it cannot be compared to characteristic incision of wares from other areas, especially the Antillean. It is obvious, however, that this incision shows greater resemblance to the simple type illustrated by Fewkes[206] from Trinidad than the more elaborate Tainan incision, especially characterized by terminal pits. Rims with a sharp outcurve, comparable to those illustrated in fig. 17, *55*, *57*, are very common on red ware from northwestern British Guiana as well as from Trinidad. Similar outcurved rims on sherds of slipped red ware, scarcely indistinguishable from La Cabrera Red, have been found on the Island of Grenada. These, as well as the Guiana specimens, have incision on the tops, in a variety of straight and cursive line and pit combinations.[207] La Cabrera Red rim incision is apparently very rare; just how much so it is impossible to say. Many of the specimens at hand could have been broken from simpler British Guiana or Grenada specimens, as far as style is concerned. Sharply outcurved rims, comparable to those just discussed, are not unusual on Antillean bowls; the combination of outcurved bowl rims and incision seems to be a mainland and Lesser Antillean characteristic, although incision itself was highly developed in the Greater Antilles. It may be noted that the "D"-shaped vertical handles found in Trinidad, the Lesser Antilles and the Crab Culture [208] of Puerto Rico are absent from the La Cabrera Phase, as is the high annular base, another characteristic of the pottery from these areas.

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[196] Saville, 1910, pl. 101, figs. 2, 5; Ferdon, 1941, p. 11.

[197] Lothrop, 1926, vol. 2, p. 244.

[198] Seler, 1893, pl. 54, no. 73; Thompson, 1936, pl. VII.

[199] Nordenskiöld, 1908.

[200] Nordenskiöld, 1919, map 14.

[201] Saville, 1924.

[202] Mason, 1939, p. 375.

[203] Palmatary, 1939, p. 112.

[204] Nordenskiöld, 1924, p. 143.

[205] Loven, 1935, p. 397.

[206] Fewkes, 1914, pls. 14, c, d, 15, b, c, d.

Boat-shaped vessels like those illustrated by Requena from Lake Valencia [209] may be imports. They are certainly suggestive of late Antillean forms, but as yet none have been found in documented excavations.

Incision and punctation on the bodies of La Cabrera Phase vessels (pls. II, *20*; V, *31*, *33*) most closely resemble the type of incision and punctation illustrated by Linné from the Gulf of Uraba,[210] rather than anything from the Antilles, Margarita or Trinidad. This chevron and dot pattern was apparently carried over into Valencia Phase times, when it was used on figurines (pl. VII, *21*) as well as rarely on vessels.

Adorno figures are not common on La Cabrera Phase ware, and in this respect the ware differs from the Margarita, Trinidad, British Guiana and late Antillean material. What modeling there is, with the exception of the naturalistic frog mentioned above, does not particularly recall any other areas with the exception of a few cases in which there appears to be a resemblance to Trinidad specimens. Coffee bean eyes resemble those from many areas, but the modeling in general has a distinctly local appearance. Round eyes are predominantly simple pitted nodes, unlike the deeply pitted late Antillean and smooth, rimmed Amazonian types. The faces on pipes and spouts do not resemble those of any other area specifically. Loven states [211] that there is a marked resemblance between some pipes from Lake Valencia, especially those with long oblique eyes, and heads from Trinidad, Grenada and Jamaica, and that other pipes (illustrated by Requena) are closely similar to Ignerian (very early Arawakan) Antillean specimens. I can see nothing but general resemblances in this respect. Any judgment of resemblance of late Antillean motives to Lake Valencia pipe decoration must be affected by the knowledge that pipes were not used in the Antilles and that their use at Lake Valencia ceased at what may have been a fairly early date. Lake Valencia pipe decoration is in no way comparable to that of specimens from south of the Amazon, excepting for the fact that some were made with human faces or figures on the bowls.

Basket- and mat-impressed pottery, of which a specimen was found in the La Cabrera Phase deposits, is not common in northern South America. Its occurrence on the Arauca is the only instance known to Linné [212] from north of the lower Amazon. This is probably not a particularly significant trait, but it may indicate an Amazonian relationship, since mat-marked sherds are not uncommon in that area.

Ear-plugs were undoubtedly worn in early times at Lake Valencia and very probably later, but those of clay from the La Cabrera Phase have endured. Nordenskiöld has mapped [213] the wide distribution of ear-blocks, found among both high cultured and simple tribes. The trait seems rare in the north, occurring only along the Orinoco and its tributaries, but there are so many ear-plugs indicated on Venezuelan Andean figurines that the custom must have been present there as well. It is probable that the use of ear-plugs is an old trait, widely spread over Middle and South America.

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[207] Roth, 1930, (ms.). Grenada sherds are in the Peabody Museum, Harvard University.

[208] Rainey, 1940, p. 59.

[209] Requena, 1932, pp. 127, 166, 167.

[210] Linné, 1929, figs. 2, 5, d, e.

[211] Loven, 1935, p. 236.

[212] Linné, 1925, map. 2.

[213] Nordenskiöld, 1919, map 18.

Stone celts from the La Cabrera Phase are distinctive, with flaring edges and oblique polls, and it is fairly certain that this form was not used in later times. I have not been able to find any South American celts of similar type, although flaring edges alone are not uncommon, especially from Colombia.[214] Flaring edged celts also occur in the Lesser Antilles,[215] but the oblique poll does not seem to be found in the island area.

### Valencia Phase

The Valencia Phase exhibits features indicating relationships with various areas. Burial methods, especially secondary urn burial, have been discussed. At La Cabrera Peninsula secondary burial was far and away the most usual method of disposal of the dead, and urns contained most of the remains. The single case of possible cremation may or may not be significant from the point of view of widespread relationships. Linné's map [216] of the distribution of this practice shows that it was widespread in North and Central America, but that in South America the distribution is decidedly northerly, never common south of Marajo Island.

Valencia Red pottery is obviously the product of a northern South American culture, but at the same time it is also quite unmistakably strongly localized stylistically. Its general characteristics, those which could be verbally described, fit the general pattern of unpainted modeled wares of a vast area. The specific treatment of elements of shape and decoration, which has produced the finished style, and individual objects in the style, was the product of a cultural development in a relatively very restricted area. Possibly, the geographical semi-isolation of the Valley of Aragua was a factor in producing such a locally homogeneous ware, and this could be true even if Valencia Red ware is eventually found outside the valley.

In spite of the local character of Valencia Red ware, there are certain elements of shape, decoration and technique which can be compared to those of other areas.

The distribution of griddles, annular bases, spouts connected by handles and female figurines, all present in the phase, has already been discussed. Large burial urns of the Valencia Red type cannot be duplicated elsewhere on the continent; there are many large undecorated urns from various areas, used for burial or the manufacture of *chicha*, but none show the combination of flat bottom, typically flared sides, rounded shoulder and incurving rim which characterizes the Lake Valencia specimens.

One of the most characteristic forms of Valencia Red pottery is the bulging neck jar, decorated with a human face in most cases. As Nordenskiöld points out,[217] this type of vessel has an extremely wide distribution in South America, being common in the whole western part of the continent from northwestern Argentina to Colombia, as well as in Brazilian Guiana and the Amazon area. Such jars are often used as burial urns, east of the Andes. Nordenskiöld believed that simple burial urns were made in anthropomorphic style after the reception from the greater Andean area of the idea of the use of facial and body representations on vessels. It is obvious that this was not always the case, since Valencia Phase anthropomorphic vessels were very seldom used to contain bones. In Central America the anthropomorphic vessel is probably less common than in South America, but many occur in the highland area of Costa Rica; Lothrop [218] points out their similarity to South American specimens. They also occur sporadically further west.

There is, then, a very wide distribution of the anthropomorphic vessel, both plain and painted; the center from which it reached the Valley of Aragua in Valencia Phase times cannot be determined as yet.

In modeled decoration Valencia Red pottery also evidences considerable local development. Analogies to other areas must remain very general. Elements or traits which can be traced are practically confined to eyes, crests, position of adornos and a few widespread motifs. Rim adornos and climbing off-rim adornos have a wide distribution from Central America over northwestern South America, the Amazon to the Antilles. Closest to Lake Valencia adorno heads appear some of those illustrated by Roth [219] from British Guiana. Many have cross-incised crests comparable to Valencia Red specimens. Eye forms are nearly all round, pitted nodes and position is also comparable. Lake Valencia adornos, not always heads, seem to exhibit a greater variation of form than is the case on Margarita, Trinidad, British Guiana or the Greater Antilles.

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[214] Linné, 1929, figs. 12, b, 36; Mason, 1936, pl. 73.

[215] Fewkes, 1922, pls. 9, c, b, 10, g, 16, a, 23, e, f, g, 24, i, f, 28, d.

[216] Linné, 1929, map 14.

[217] Nordenskiöld, 1930, pp. 31–33.

[218] Lothrop, 1926, vol. 2, p. 407.

The use of modeled adornos is also common on pottery from west of Lake Valencia, although nowhere in western Venezuela is there such a profusion of adornos as has been found at the Lake Valencia sites. They do not occur commonly on highland Colombian pottery, but Colombian north coastal wares were sometimes so decorated.[220] At Santa Marta comparable adornos are rare. The profusion of shoulder adornos from Panama and Costa Rica has been mentioned above. Many bowls from the Ecuador highlands [221] exhibit adornos which, in their position on bowls, are closely comparable to Venezuelan specimens.

Nordenskiöld [222] has stressed the similarities in style of modeling of adorno heads which exist between the Antilles, the Guianas and the Amazon, especially Santarem, as well as the Central American aspects of Santarem material. Palmatary stresses Santarem, Lesser Antilles contacts.[223] However, none of the specific adorno types which undoubtedly indicate relationship between these regions are to be found at Lake Valencia.

For example, the vulture head adorno,[224] occurring at Santarem, Brazilian Guiana, British Guiana, (Roth's unpublished illustration) and Arauquin, on the Apure delta,[225] is not found in the Valencia Phase.

Adornos presumably representing bats have been found in some quantities in Valencia Phase deposits; they are probably late. Spinden stresses their occurrence.[226] The bat motif is widespread, but pottery representations in forms similar to the Lake Valencia examples are rare. The bat occurs on Central American pottery,[227] probably in adorno form in British Guiana (Roth's unpublished manuscript), and probably in the same form from the Antilles.[228] On the Amazon, bats are modeled on Santarem pottery.[229]

Bats are well known in gold from Central America and Colombia. Their representation in stone has been stressed as evidence of cultural relationships between Central America and Venezuela, with implications that the Maya originated the concept of the Bat God and that it spread directly to Venezuela.

The double-headed and hands-to-face motifs are discussed by Palmatary.[230] Both occur in Valencia Phase modeling, the former usually in the form of bird head adornos, the latter on figurines, bulging neck jars and even occasionally on adornos (pl. X, *26*, 27, *32*, *33*).

The double-headed or paired head motif occurs chiefly in Chiriqui, Costa Rica and the southeastern United States; it is common at Santarem and is apparently rare in the Lesser Antilles. It is also rare in the Valencia Phase, and a few examples have been noted in Andean Venezuela on tetrapod vessels (pl. XVI, *11*, *12*).

The hands-to-face motif is more widely distributed in South America. It occurs in Darien, Colombia (Santa Marta),[231] Ecuador, British Guiana, Santarem, Marajo Island and the Greater Antilles. I am inclined to believe that this approximately continuous continental distribution may be of greater historical significance than that of the double-headed motif. The fact that hands-to-face designs appear to be largely on late Greater Antillean forms is significant in connection with Rouse's [232] hypothesis of Antillean pottery origins, since the motif does not seem to have been used in the southeastern United States.

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[219] Roth, 1930 (ms.).

[220] Linné, 1929, figs. 2; 5, c.

[221] Jijon y Caamaño, 1927, vol. I, pls. 97, 98, 102–107.

[222] Nordenskiöld, 1930, pp. 26–36, figs. 1, 3, 5.

[223] Palmatary, 1939, pp. 59, 60.

[224] Nordenskiöld, 1930, fig. 5.

[225] Petrullo, 1939.

[226] Spinden, 1916, p. 326.

[227] Lothrop, 1926, vol. 2, p. 352, fig. 121.

[228] Krieger, 1931, pls. 8, 19, 33; Rainey, 1940, pls. 1, 3.

[229] Nordenskiöld, 1930, pl. 28, b.

[230] Palmatary, 1939, pp. 89–92, 114–116.

[231] Mason, 1939, pl. 246, 3.

[232] Rouse, 1940.

An interesting trait found in connection with Valencia Phase pottery is mending by the "crack-lacing" method. The distribution of this method has been mapped by Linné,[233] who points out that it is a typically western South American culture element. Lake Valencia is the most easterly point in the north where it has been recorded; but on the west coast, in the Andes and in northwestern Argentina, it is very common. In southern Central America it is rare.

Stone celts from the Valencia Phase represent a generalized, widespread type. The use of the simple petaloid celt is spread from the Antilles over the entire northern South American and Central American area. None of the specialized side notched or grooved axes, found in the Lesser Antilles, Trinidad, the Guianas, Margarita Island and Ecuador appear in the Valencia Phase. There is thus a sharp distinction in stone work between the Valencia Phase and the general Lesser Antillean and Guiana areas.

The stones which I have called "triangular" may have some connection with the "three-pointed" stones of the simpler type found chiefly in Puerto Rico and Santo Domingo [234] but also apparently in some of the Lesser Antillean Islands and in Curacao.[235] There is a marked resemblance between the Lake Valencia specimens and several from Puerto Rico, lacking carving, to be found in the Peabody Museum.

Stone "buttons" from the Valencia Phase are of the same style as one of pottery from Falcon [236] and are also very similar to a number of Santa Marta specimens.[237]

Shell button-like objects also exhibit close similarity to specimens from the same region.[238]

Skull deformation, found at Lake Valencia and elsewhere in Venezuela, as well as being a feature of Tainan culture, is said by Nordenskiöld [239] to be decidedly western in its South American distribution, with the exception of its presence in the Antilles and Venezuela.

## Margarita and Trinidad

Trinidad and Margarita Island in general have been shown to share certain traits with cultures to the west, but Cape Mayoro material, at least, is most closely affiliated to the Crab Culture (Cuevas type) of Puerto Rico and the Lesser Antilles.[240]

Erin Bay and Margarita Island also exhibit some Crab Culture traits but not enough to warrant including them on a map showing Crab Culture (Cuevas type) distribution. Material from these two rather poorly represented localities displays some relationships with the La Cabrera Phase. However, these are insufficient to prove a definite relationship of the La Cabrera Phase to Crab Culture, nor is Cape Mayoro and La Cabrera Phase material sufficiently alike to allow the postulation of contemporaneity of La Cabrera and Crab Culture (Cuevas type) wares. However, the discovery of painted trade sherds in La Cabrera Phase deposits, and the marked similarity of some La Cabrera Red sherds to a few Grenada and Trinidad pieces is suggestive in this respect, if nothing more.

It is upon discovery of mainland material more similar to that of Crab Culture (Cuevas type) remains that the solution of its origins in the Antilles rests. The mainland origins of Crab Culture pottery, postulated both by Rainey and by Rouse, appear to be well founded. I should be inclined to look farther west in Venezuela and Colombia for such origins, rather than to Marajo and the Guianas.

Trinidad and Margarita, which, with the Paria area, are geographically most favorably situated for the transmission of mainland culture to the Antilles, both display certain generally western traits, or traits which have been considered of western origin on the basis of known distribution. These include the use of paint (especially red and white), annular bases and probably the leg-ring base. With the exception of the latter, these are important Crab Culture (Cuevas type) attributes. Other traits, such as those listed by Rouse,[241] are in general too difficult to visualize or too generally distributed to be of particular value in seeking origins, at present. However, several do occur west of the Guianas; for example: flat bottoms, everted rims, ornamentation on any part of the vessel, affixation, incision filled with paint, red slip applied before firing, negative painted designs, polychrome designs and modeling. Admittedly, this is not an impressive list upon which to base an argument for western origins of the early Antillean painted wares. However, as stated above (p. 155), some of the Carache and Andean spiral designs suggest the Crab Culture (Cuevas type) motifs more strongly to me than do any of the Guiana or Amazon motifs.

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[233] Linné, 1929, p. 207, map 12.

[234] Fewkes, 1922, p. 211, fig. 52, pl. 110, a; Rainey, 1940, pl. 2, no. 6.

[235] Josselin de Jong, 1924.

[236] Nomland, 1935, pl. 17, a–c.

[237] Mason, 1936, pl. 116.

[238] Mason, 1936, pl. 130.

[239] Nordenskiöld, 1931, p. 73.

[240] Rainey, 1940, pp. 174–175; Rouse, 1940, p. 61, fig. 3.

The entire question of origins of the early Antillean pottery has had to be regarded differently since Rainey's discoveries [242] were made. Nordenskiöld's theory [243] of the spread of the art of painting pottery before firing from the central Andes to Amazon and thence north to the Antilles, subsequent to the Arawak migration to the Greater Antilles, has had to be discarded.

Beyond granting Rainey's and Rouse's hypothesis, now greatly strengthened by recent finds on the lower Orinoco,[243a] that the South American mainland is the place of origin of such material and presumably the culture which produced it in the Antilles, there is little but speculation to add to the discussion. On this basis, the presence of painted wares on the Caribbean littoral from Maracaibo to Trinidad and in the Venezuelan Andes, at Carache and even in the form of some trade pieces in La Cabrera Phase deposits, suggests a spread from the west, possibly as far as Marajo. If such a spread had occurred, one might explain the unpainted pottery of Santarem, northwestern British Guiana, Arauquin, the Valencia Phase, Coro, perhaps Santa Marta and other lowland Colombian sites, and even a large part of the southern Central American plain, modeled wares as a later northern South American development. From such a ceramic tradition, the later unpainted pottery of the Greater Antilles could have developed in part. This would not contradict Rouse's hypothesis [244] of the northern origin of Meillac Type pottery.

If the above were true, the presence of painted wares in the Venezuelan Andes, in what seems to be a very late period, would have to be explained as persistence in a relatively isolated area. Since no proper time scale can, as yet, be applied to the whole vast area, such speculation is of value only in suggesting possibilities which might be worthy of investigation.

In general, Venezuelan archaeological cultures suggest origins from a number of sources. In many cases there is no very good evidence in regard to whence, exactly, components may have reached Venezuela. Certain elements, simply from their distribution, tend to seem of western, others of eastern origin, and certain others are even more speculative. As I have said above, there are a number of elements which seem western, but for the ultimate origin of which there is no evidence whatsoever. This is especially true, naturally, of those traits which are usually supposed to have originated in Central America.

Found in Venezuela, cremation, annular bases, leg-ring bases, tripod vessels, pottery stamps, female figurines, "archaic" modeled decoration and the bat motif are usually thought to be evidence of Central American influence. All these may be of ultimate Central American origin; yet there is real proof for none, and considerable doubt in some cases. For example, I have pointed out that the leg-ring base may, from its apparent frequency and development, have had its origin in western Venezuela, for all we know to the contrary.

Elements which appear to have come from

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[241] Rouse, 1940, p. 67.

[242] Rainey, 1935, 1940.

[243] Nordenskiöld, 1930, pp. 26–36.

[243a] Osgood, 1942.

[244] Rouse, 1940.

northwestern South America, possibly from Colombia or from the Andes farther south, which are mostly Andean in Venezuela, include stone walls and terracing, deep graves, the male figurine seated on a stool, the bowl in the hand and probably the frog motif in pottery. It does not seem possible that the stirrup-spouted vessel and the double-spouted vessel could have originated anywhere but in Peru, but both forms may have independently developed locally.

Such elements as neck corrugation, "crack-lacing," skull deformation, broad-winged ornaments, "buttons" of stone are also probably of western, but not necessarily of Central American, origin.

Altogether, the traits of supposedly western origin in Venezuela seem to indicate a closer relationship, of western Venezuela at least, with the Colombian and lower Central American areas than with the central Andes, particularly Peru. However, no single complex in these areas can be pointed out as predominantly influential in Venezuela; no Venezuelan phase or complex represents an extension from a specific western outside source. Comparable climatic zones over most of northwestern South America and lower Central America shared similar economies and were at the same general cultural level, but local material cultures were strongly differentiated. Venezuela, probably through relative isolation from the central Andes and lack of easily exploitable raw materials, never produced the quantity of gold work which has received disproportionate attention in Colombia and lower Central America. Leaving metallurgy out of account, there would be little qualitative difference in the material cultures of the greater part of northwestern South America.

The anthropomorphic, bulging neck vessel is usually considered western, even Central American, but its very common occurrence in the Valencia Phase in combination with eastern and Amazonian traits inclines me to the opinion that it was introduced from the east or south with most of the other elements of the phase. Secondary urn burial appears to be a definitely South American trait, possibly of Amazonian origin; the same is true of griddles, distinguished from the "comal" of tortilla baking areas. Endo-cannibalism is also probably of Amazonian origin, as well as the use of frog amulets. There are, then, several traits of possible western origin in the Valencia Phase which may well have been introduced into the Valley of Aragua from the east or south, and possibly others of South American origin, such as urn burial, may have penetrated far to the west long before the Valencia Phase became established.

Mummification by fire drying seems eastern in South America, but as Linné points out,[245] its distribution corresponds closely to that of cremation, apparently a western trait.

Linné [246] cites a number of parallels between the lower Amazon and Venezuela, including secondary urn burial, four-footed animal figures on urn lids (Atures), tripod vessels, ring-based vessels (low annular bases), vessels with solid true-ring circular bases (annular bases), Atlantean supports, vessels with a number of perforations in their manufacture, or with hollow rims (Valencia Phase, but none found at Los Tamarindos).

Palmatary [247] adds the following: eye form (round-rimmed protuberant), hands-to-face motif, double-headed motif, hunchback figurines or effigies with vertebrae, crescent based figurine (spread-legged type).

Some of these traits may appear to be of western origin and may have been passed to the lower Amazon and to Venezuela at the same time. Others, notably secondary urn burial, are more likely to have had southeastern origins. To these might be added the use of a tooth-blackening masticant (p. 13), although this may be of western Amazonian origin, the penis cover (p. 13), the blowgun (p. 14) and masked dances and flagellation, reported from the Venezuelan Andes by Jahn.[248] Thus the Venezuelan northern littoral and Andes exhibit generalized eastern and southern traits as well as more definitely western and central Andean ones.

Elbow pipes and ear-plugs are both presumably very old elements in South America, but the use of the pottery pipe seems to have been largely abandoned in northern South America except in Venezuela, while the earplug seems to have attained wide use in various forms.

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[245] Linné, 1929, p. 236.

[246] Linné, 1937, p. 30.

[247] Palmatary, 1939, pp. 122–123.

[248] Jahn, 1927, pp. 310–324.

Venezuelan cultures, known in little historical perspective, seem to have resulted from a fusion of many western, possibly Central American, elements, many of which seem to have passed to the east and south of Venezuela proper, and of elements more definitely eastern and southern in origin, many of which in turn seem to have passed to the north and west. This is a situation which one might reasonably predict on geographical grounds, but factors of time, local adaptation and change combine to make it a most complex one.

Our present knowledge is unsatisfactory. Too much emphasis has probably been placed on unassociated traits, a natural result of having to work with so much material torn from its archaeological context. Most of our conclusions rest on the evidence of distribution of such traits, rather than on a knowledge of the close relationships of trait complexes in space and time. When an attempt is made to relate a given phase in Venezuela to outside areas, it is possible only to generalize, as I have done above. This is productive of certain tentative conclusions illustrative of the complexity of the entire problem but can scarcely be called historical reconstruction.

It is easy, for example, to regard the Valencia Phase, as I am inclined to, as of southern and eastern origin. But the generally similar material from several sites in these regions, plus a few rather specific types of objects found at Lake Valencia, on the Amazon and in the Guianas, indicates only a very probable relationship. Such a relationship can, at present, only be defined in such general terms as were used in speculating, above, on the spread of unpainted, profusely modeled pottery in northern South America, the Antilles and southern Central America.

Aspects of Venezuelan archaeology which seem of generally western inspiration in the Andean, Carache, Falcon and in some respects the La Cabrera Phase, cannot be related, other than very generally, to particular areas. In short, our data are so meager that worth-while assumptions cannot safely be made, which naturally hinders the entire process of drawing logically safe conclusions. It is thus obviously unwise to postulate centers of dispersal, either for the single elements with which we have been largely concerned, or for the few complexes which have been more or less defined. It is for this reason that the definition of certain phases and the partial geographical isolation of certain types of objects is important.

In reconstructing the cultural history of most of South America, linguistic data are probably going to be of relatively little value for all but the latest periods. Some broad, valid relationships of archaeological culture patterns and linguistic groupings may be discernible in future, but at present the correlation of archaeological material with linguistic stocks is dangerous. There does not seem to be much doubt, however, that the Andean material was left by the Timotean and that the north coastal and Dutch Island material is Arawakan. The Carache and Lara remains are impossible to assign but may be Arawakan or "Cuican" (Timotean). It is useless to speculate in regard to the La Cabrera Phase; it is probably not Arawakan or Cariban, if Nordenskiöld is correct in his statement in regard to elbow pipes. The Valencia Phase is also impossible to assign. It contains evidence of traits common to Carib and Arawak alike, and there is some indication of a disruption of peoples in the area at the time of the Conquest. The Caribs to the east and west of Lake Valencia, indicated by Jahn,[249] may actually have superseded an Arawakan group responsible for the Valencia Phase.

Venezuelan, particularly western Venezuelan, material has demonstrated, I believe, the complexity of the problems involved in the archaeology of northwestern South America in general. As yet we know very little of the Venezuelan Andean, north coastal and Lara areas, to say nothing of the Maracaibo Basin and the *llanos*. Tachira and eastern Colombia, which might give some information in regard to the eastern periphery of the Chibcha area, are virtually unknown archaeologically. The highland Chibcha area itself has never been properly studied. In view of the presence of a number of parallels between Venezuela and

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[249] Jahn, 1927, linguistic map.

Colombia, work in either region should be equally important. The Colombian and Venezuelan Andes are certainly important in the study of agricultural origins in the Americas, and should be explored thoroughly for this reason, if for no other.

From the point of view of Antillean contacts and migrations, the Paria region and the entire eastern Venezuelan field should prove most fruitful. Relatively little is known of it today.

The *llano* area is known to contain remains, probably indicative of the Amazonian relationships postulated for the Valencia Phase.

In short, there are almost unlimited possibilities for valuable work throughout the entire northwestern South American region. With reasonable data from points scattered throughout the whole area, we should be able to point out which combinations of elements first arrived, where they came from and how they were followed by successive influences. The history of certain culture elements, now thought to have passed through this region, might be chronologically ordered. Certain other traits could almost certainly be proved to have developed locally; among these there might even be certain agricultural developments of great interest. Certainly there should emerge from a systematic program of investigation a far clearer picture of the interrelationships of innumerable local phases and of their ultimate relationships with the great centers of high culture to the south and west.

# BIBLIOGRAPHY

# BIBLIOGRAPHY

ALVARADO, L.

1912. Objetos prehistoricos de Venezuela. *Revista tecnica del ministerio de obras publicas*, vol. 2. Caracas.

AMERICAN ANTIQUITY.

1935–1936. A quarterly review of American archaeology. Vol. I. Menasha.

ARANGO, L.

1918. Recuerdos de guaqueria en el Quindio. Barcelona.

ARCAYA, P. M.

1916. Narracion del primer viaje de Federmann a Venezuela. (P. M. Arcaya, translator.) Caracas.

BENNETT, W. C.

1937. Excavations at La Mata, Maracay, Venezuela. *The American Museum of Natural History, Anthropological Papers*, vol. 36, pt. 2. New York.

BERRY, E. W.

1939. Geology and paleontology of Lake Tacarigua, Venezuela. *The American Philosophical Society, Proceedings*, vol. 81, no. 4. Philadelphia.

BOUSSINGAULT, J. B. J. D.

1849. Viajes cientificos a los Andes ecuatoriales. Paris.

BRETON, A. C.

1921. The Aruac Indians of Venezuela. *Man*, vol. 21, pp. 9–12. London.

BRICEÑO-IRAGORRY, M.

1928. Ornamentos funebres de los aborigines del occidente de Venezuela. Caracas.

1929. Procedencia y cultura de los Timotes — Cuycas. *Universidad de Venezuela, Anales*, vol. 17, no. 2. Caracas.

CARVAJAL, JACINTO DE

1892. Relacion del descubrimiento del Rio Apure hasta su ingreso en el Orinoco. Leon.

CASTELLANOS, JUAN DE

1852. Elegias de varones illustres de Indias. (B. C. Aribau, editor.) Biblioteca de autores Españoles, vol. 4. Madrid.

CHAFFANJON, J.

1889. L'Orenoque et le Cauca. Paris.

CHARDON, C. E.

1933. Life zones in the Andes of Venezuela. *Pan-American Union, Bulletin*, vol. 67, no. 8. Washington.

CREVAUX, J.

1883. A travers la Nouvelle-Grenade et le Venezuela. (Voyage dans L'Amerique du Sud.) Paris.

CRIST, R. E. AND CHARDON, C. E.

1941. Changing patterns of land use in the Valencia Lake Basin of Venezuela. *The Geological Review*, vol. 31, no. 3. New York.

DAVILA, V.

1927. Encomiendas. Vol. 1. Caracas.

DE BOOY, T.

1916. Notes on the archaeology of Margarita Island, Venezuela. *The Museum of the American Indian, Heye Foundation, Contributions*, vol. 2, no. 5. New York.

1917. Certain archaeological investigations in Trinidad, B.W.I. *American Anthropologist*, n.s., vol. 19, no. 4. Lancaster.

ERNST, A.

1871. Notes on some Indian remains found in Venezuela. *Journal of Anthropology*, vol. 1, no. 3, pp. 7–9. London.

1872. Anthropologische Miscellen aus Venezuela. *Globus*, vol. 21, no. 8. Braunschweig.

1878. Indianische Alterthümer aus Venezuela. *Globus*, vol. 33, pp. 377–380. Braunschweig.

1884. Archeologische Gegenstände, namentlich 2 Nephritische, aus Venezuela. *Zeitschrift für Ethnologie* (*Verhandlung*), vol. 16, pp. 453–458. Berlin.

1885a. Uber die Reste der Ureinwohner in den Gebirgen von Merida. *Zeitschrift für Ethnologie*, vol. 17, p. 190. Berlin.

1885b. Nephritbeil und die Klangplatten von Venezuela. *Zeitschrift für Ethnologie (Verhandlung)*, vol. 17, p. 126. Berlin.

1885c. Photographie der Piedra de los Indios. *Zeitschrift für Ethnologie (Verhandlung)*, vol. 17, p. 267. Berlin.

1886a. Die Venezuelanische Ubervölkerung. *Zeitschrift für Ethnologie (Verhandlung)*, vol. 18, p. 321. Berlin.

1886b. Bilder-und Schallensteine von Venezuela. *Zeitschrift für Ethnologie (Verhandlung)*, vol. 18, p. 371. Berlin.

1886c. Ethnographische Mitteilungen aus Venezuela. *Zeitschrift für Ethnologie (Verhandlung)*, vol. 18, pp. 514–545. Berlin.

1886d. Sprachproben der Ureinwohner von Venezuela. *Zeitschrift für Ethnologie (Verhandlung)*, vol. 18, p. 372. Berlin.

1888. Prehistorischen und Ethnographischen Gegenständen aus Venezuela. *Zeitschrift für Ethnologie (Verhandlung)*, vol. 20, p. 467. Berlin.

1890. Venezuelanische Thongefässe und Tonfiguren aus alter und neuer Zeit. *Internationales Archiv für Ethnographie*, vol. 3, pp. 169–175. Leiden.

Febres Cordero, T.

1920. Decadas de la historia de Merida. Merida.

1921. Historia de los Andes — Procedencia y lengua de los aborigines. Merida.

Ferdon, E. N., Jr.

1941. Reconnaissance in Esmeraldas. *El Palacio*, vol. 48, no. 1. Santa Fe.

Fewkes, J. W.

1907. The aborigines of Porto Rico and neighboring islands. *Bureau of American Ethnology, 25th Annual Report.* Washington.

1914. Prehistoric objects from a shell-heap at Erin Bay, Trinidad. *American Anthropologist*, n.s., vol. 16, no. 2. Lancaster.

1922. A prehistoric island culture area of the Americas. *Bureau of American Ethnology, 34th Annual Report.* Washington.

Geay, F.

1895. Les Llanos. *La Science Française*, no. 37, pp. 172–174. Paris.

Giglioli, E. H.

1910. Die certi singolari pettorali in pietra ed in conchiglia precolombiani della Venezuela, probabili effigi del dio vampiro degli antichi indigeni dell' America Centrale. *International Congress of Americanists, Proceedings*, 16th session, 1908, 2nd half, pp. 321–330. Vienna.

Gladwin, W. and H. S.

1934. A method for designation of cultures and their variations. *Medallion Papers*, no. 15. Globe.

Goeldi, E. A.

1900. Excavaçoes archeologicas em 1895. Executadas pelo Museu Paraense no littoral de Guyana Brazileira entre Oyapock e Amazonas. *Museu de Historia Natural e Ethnographia, Memorias*, vol. I. Para.

Hamy, E. T.

1897. Urne funeraire des Atures des raudals de l'Orenoque. Gallerie Americaine du Musée d'ethnographie du Trocadero, pt. 2, pl. 57, p. 172. Paris.

Hartman, C. V.

1901. Archaeological researches in Costa Rica. Stockholm.

Heger, F.

1924. Klangplatten von Nephrit aus Venezuela. *International Congress of Americanists, Proceedings*, 21st session, pt. 2, pp. 148–155. Göteborg.

Herrera, Antonio de

1725. The general history of the vast continent and islands of America, commonly called the West Indies. Translated into english by Captain John Stevens. Vols. 1 and 2. London.

Holmes, W. H.

1888. Ancient art of the Province of Chiriqui, Colombia. *Bureau of American Ethnology, 6th Annual Report.* Washington.

Humboldt, A. and Bonpland, A.

1814–1829. Personal narrative of travels to the equinoctial regions of the new continent, during the years 1799–1804. (Translated by Helen Maria Williams.) Vols. 4 (1819) and 5 (1821). London.

Jahn, A.

1927. Los aborigines del Occidente de Venezuela. Caracas.

1934. Las temperaturas medias y extremas de las zonas altitudinales de Venezuela. Caracas.

1940. Estudio sobre el Lago de Valencia. *Academia Nacional de la Historia, Boletin*, vol. 33, no. 91. Caracas.

Jane, C.

1930. The voyages of Christopher Columbus. London.

Jijon y Caamaño, J.

1920. Nueva contribucion al conocimiento de los aborigines de la Provincia de Imbabura de la Republica del Ecuador, *Sociedad Ecuatoriana de Estudios Historicos Americanos, Boletin*, vol. 4, no. 10. Quito.

1927. Puruha-contribucion al conocimiento de los aborigines de la Provincia de Chimborazo de la República del Ecuador. Quito.

Josselin de Jong, de J. P. B.

1918. The praecolumbian and early postcolumbian aboriginal population of Aruba, Curaçao and Bonaire. *Internationales Archiv für Ethnographie*, vol. 24. Leiden.

1920. The praecolumbian and early postcolumbian aboriginal population of Aruba, Curaçao and Bonaire. *Internationales Archiv für Ethnographie*, vol. 25. Leiden.

1924. A natural prototype of certain three-pointed stones. *International Congress of Americanists, Proceedings*, 21st session, pt. 1, pp. 43–45. The Hague.

Joyce, T. A.

1907. Prehistoric antiquities from the Antilles, in the British Museum. *Royal Anthropological Institute, Journal*, vol. 37, pp. 402–419. London.

Kidder, A. V.

1932. The artifacts of Pecos. New Haven.

Kidder, A. V. and Shepard, A. O.

1936. The pottery of Pecos. Vol. 2. New Haven.

Krieger, H. W.

1931. Aboriginal Indian pottery of the Dominican Republic. *United States National Museum, Bulletin* 156. Washington.

Las Casas, Bartolome de

1927. Historia de las Indias. (M. Aguilar, editor.) Vols. 1 and 2. Madrid.

Latorre, G.

1919. Relaciones geograficas de Indias. Publicaciones del centro oficial de estudios Americanistas de Sevilla. Biblioteca colonial Americana, vol. 3. Sevilla.

Lawrence, A. W. and Young, J.

1931. Narratives of the discovery of America. New York.

Leemans, C.

1904. Altertümer von Curaçao, Bonaire und Aruba. *Mitheilungen aus dem Nederlandische Reichs Museum für Völkerkunde*, pp. 25–35. Haarlem.

Linné, S.

1925. The technique of South American ceramics. Göteborg.

1929. Darien in the past. Göteborg.

1937. Notes on the archaeology of Venezuela. *Ethnos*, vol. 2, no. 1. Stockholm.

Lothrop, S. K.

1926. Pottery of Costa Rica and Nicaragua. *The Museum of the American Indian, Heye Foundation, Contributions*, vol. 8, New York.

1932. Indians of the Parana Delta, Argentina. *New York Academy of Sciences, Annals*, vol. 33. New York.

1934. Summary of archaeological work in the Americas 1931–1934. I. South America. *Pan-American Union, Bulletin*, vol. 68, no. 4. Washington.

1937. Coclé — An archaeological study of Central Panama. Pt. 1. *Peabody Museum of American Archaeology and Ethnology, Memoirs*, vol. 7. Cambridge.

Loven, S.
1935. Origins of the Tainan culture, West Indies. Göteborg.

Lunardi, F.
1935. La vida en las tumbas. Rio de Janeiro.

MacCurdy, G. G.
1911. A study of Chiriquian antiquities. *Connecticut Academy of Arts and Sciences, Memoirs*, vol. 3. New Haven.

MacNutt, F. A.
1912. De Orbe Novo — The eight decades of Peter Martyr d'Anghera. Translated from the latin with notes and introduction. Vol. 1. New York.

Marcano, G.
1889. Ethnographie precolombienne du Venezuela — Vallees d'Aragua et de Caracas. *Societe d'Anthropologie de Paris, Memoires*, 2nd series, vol. 4, pp. 1–86. Paris.
1890. Ethnographie precolombienne du Venezuela — la region des raudals de l'Orenoque. *Societe d'Anthropologie de Paris, Memoires*, 2nd series, vol. 4, pp. 99–218. Paris.

Mason, J. A.
1936. Archaeology of Santa Marta, Colombia. The Tairona culture. Pt. 2, section 1. Objects of stone, shell, bone, and metal. *Field Museum of Natural History, Anthropological Series*, vol. 20, no. 2. Chicago.
1939. Archaeology of Santa Marta, Colombia. The Tairona culture. Pt. 2, section 2. Objects of pottery. *Field Museum of Natural History, Anthropological Series*, vol. 20, no. 3. Chicago.

Moses, B.
1914. The Spanish dependencies in South America. Vol. 1. Edinburgh.

Navarette, Martin Fernandez de
1829. Coleccion de los viajes y descubrimientos. Vol. 3. Madrid.

Nectario María, Hno
1933. Descubrimientos arqueologicos en la region de Barquisimeto. *Excelsior*, vol. 2, no. 30. Barquisimeto.

Netto, L.
1885. Investigacoes sobre a archeologia Brazileira. *Museu National do Rio de Janeiro, Archivos*, vol. 6, pp. 261–544. Rio de Janeiro.

Nomland, G. A.
1933. Archaeological site of Hato Viejo, Venezuela. *American Anthropologist*, n.s., vol. 35, no. 4. Menasha.
1935. New archaeological sites from the State of Falcon, Venezuela. *Ibero-Americana*, vol. 11. Berkeley.

Nordenskiöld, E.
1908. Südamerikanische Rauchpfeifen. *Globus*, vol. 93, no. 19. Braunschweig.
1913. Urnengraben und Mounds im Bolivianischen Flachlande. *Baessler Archiv*, vol. 3, no. 5. Leipzig and Berlin.
1919. An ethno-geographical analysis of the material cultures of two Indian tribes in the Gran Chaco. *Comparative Ethnographical Studies*, vol. 1. Göteborg.
1920. The changes in the material culture of two Indian tribes under the influence of new surroundings. *Comparative Ethnographical Studies*, vol. 2. Göteborg.
1924. The ethnography of South America seen from Mojos in Bolivia. *Comparative Ethnographical Studies*, vol. 3. Göteborg.
1930. L'archeologie du Basin de l'Amazone. *Ars Americana*, vol. 1. Paris.
1931. Origins of the Indian civilizations in South America. *Comparative Ethnographical Studies*, vol. 9. Göteborg.

Northup, G. T.
1916. Vespucci reprints, texts and studies, 4. The Soderini letter in translation. Translated with introduction and notes by George Tyler Northup. Princeton.

Oramas, L. R.
1917. Apuntes sobre arqueologia Venezolana. *Pan-American Scientific Congress, Proceedings*, vol 1. Washington.

Osgood, C.
1942. Prehistoric contact between South America and the West Indies. *National Academy of Sciences, Proceedings*, vol. 28, no. 1, pp. 1–4. Washington.

Oviedo y Baños, Jose de
1885. Historia de la conquista y problacion de la Provincia de Venezuela. (C. F. Duro, editor.) Vols. 1 and 2. Madrid.

Oviedo y Valdes, Gonzalo Fernandez de
1852. Historia general y natural de las Indias, Islas y Tierra Firme del Mar Oceano. Vol. 2. (Jose Amador de los Rios, editor.) Madrid.

Palmatary, H. C.
1939. Tapajó pottery. *Ethnological Studies*, vol. 8. Göteborg.

Petrullo, V.
1939. Archaeology of Arauquin. *Bureau of American Ethnology, Bulletin* 123. Washington.

Pittier, H. F.
1932. Classificacion natural de las plantas con especial mencion de las familias mas importantes de la flora de Venezuela y de las especies de interes economico. *Tipografia Americana*. Caracas.

Preuss, K. T.
1929. Monumentale vorgeschichtliche Kunst. Göttingen.

Rainey, F. G.
1935. A new prehistoric culture in Puerto Rico. *National Academy of Sciences, Proceedings*, vol. 21, no. 1. Washington.
1940. Porto Rican archaeology. *The New York Academy of Sciences, Scientific Survey of Porto Rico and the Virgin Islands*, vol. 18, pt. 1. New York.

Requena, R.
1932. Vestigios de la Atlantida. Caracas.

Ridgway, R.
1912. Color standards and color nomenclature. Washington.

Ries, M.
1936. Amerigo Vespucci and the Maya area. *Maya Research*, vol. 3, no. 1. New Orleans.

Rochereau, H.
1920. Les Chitarera, anciens habitants de la region de Pamplona, Colombie. *Societe Americanistes de Paris*, Journal, n.s., vol. 12, pp. 55–63. Paris.

Roth, W. E.
1924. An introductory study of the arts, crafts and customs of the Guiana Indians. *Bureau of American Ethnology, 38th Annual Report*. Washington.
1930. A preliminary survey of certain prehistoric pottery ware from the northwestern District of British Guiana. Manuscript deposited in the Smithsonian Institution. Washington.

Rouse, I.
1940. Some evidence concerning the origins of West Indian pottery-making. *American Anthropologist*, n.s., vol. 42, no. 1. Menasha.

Saville, M. H.
1910. The antiquities of Manabi, Ecuador. Final Report. *Contributions to South American Archaeology*, vol. 2. New York.
1924. Ancient smoking-pipes from Ecuador. *Museum of the American Indian, Heye Foundation, Indian Notes*, vol. 1, no. 2. New York.

Seler, E.
1893. Peruanische Alterthümer. Berlin.

Sievers, W.
1888. Die Cordillere von Merida. Vienna.

Simon, Fray Pedro
1882. Noticias historiales de las conquistas de Tierra Firme en las Indias Occidentales. (M. Rivas, editor.) Vol. 1. Bogota.

Spinden, H. J.
1916. New data on the archaeology of Venezuela. *National Academy of Sciences, Proceedings*, vol. 2, pp. 325–327. New York.

Thompson, J. E.
1936. Archaeology of South America. *Field Museum of Natural History, Anthropology Leaflet* 33. Chicago.

Uhle, M.

1889. Kultur und Industrie Südamerikanischer Völker. Vol. 1. Berlin.

1923. Toltecas, Mayas y civilizaciones sudamericanas. *Academia Nacional de Historia, Boletin*, vol. 7, no. 18. Quito.

Vaillant, G. C.

1932. Some resemblances in the ceramics of Central and North America. *Medallion Papers*, no. 12. Globe.

Vellard, J.

1938. Contributions a l'archeologie des Andes Venezueliennes (premiere note). *Societe des Americanistes de Paris, Journal*, n.s., vol. 30, no. 1. Paris.

Verneau, R.

1901. Ancienne sepulture de la riviere Arauca affluent de l'Orenoque. *Societe des Americanistes de Paris, Journal*, vol. 3, no. 2. Paris.

Von den Steinen, K.

1904. Ausgrabungen em Valenciasee. *Globus*, vol. 86, no. 7. Braunschweig.

Wassén, H.

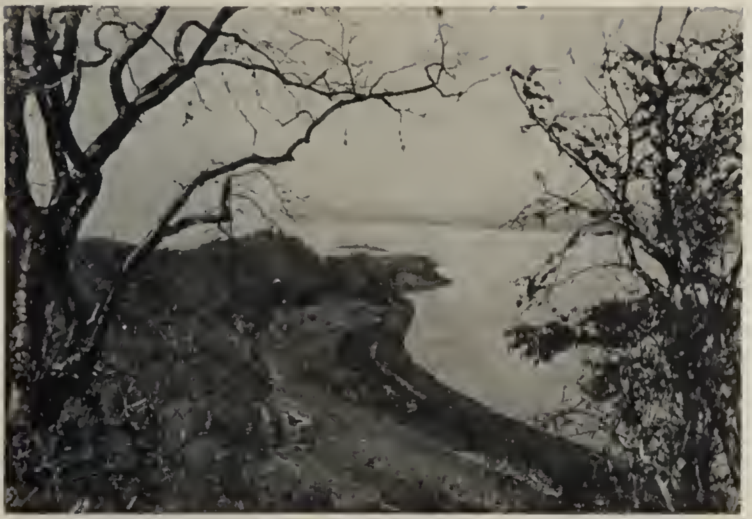
1934. The frog-motive among the South American Indians. *Anthropos*, vol. 29. St. Gabriel — Mödling.

1936. An archaeological study in the western Colombian Cordillera. *Ethnological Studies*, vol. 2. Göteborg.

Wetmore, A.

1935. Pre-columbian bird remains from Venezuela. *The Auk*, vol. 52, no. 3. Lancaster.

# PLATES



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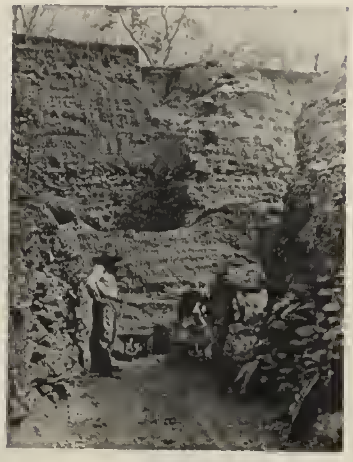

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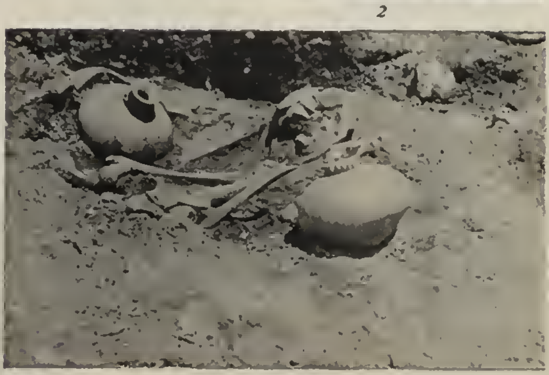

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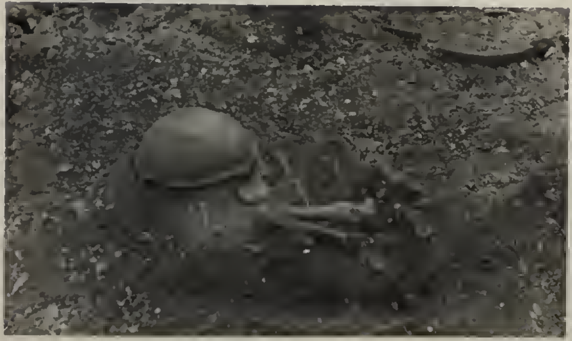

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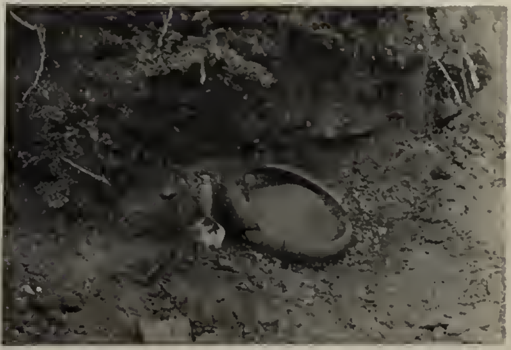

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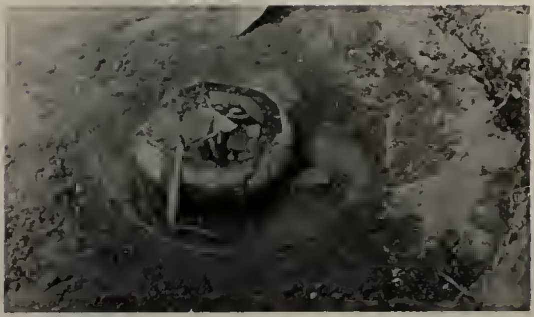

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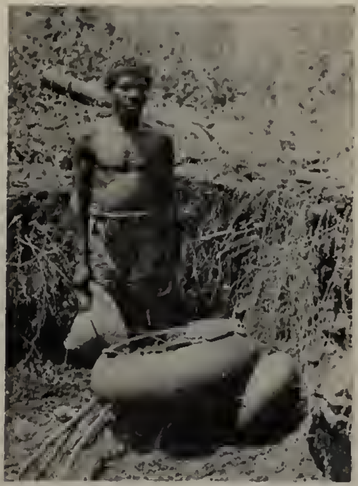

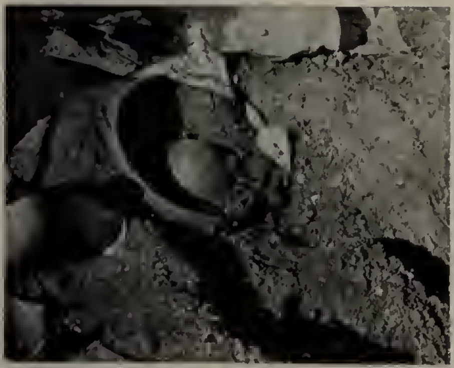

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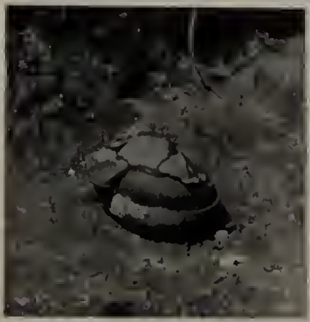
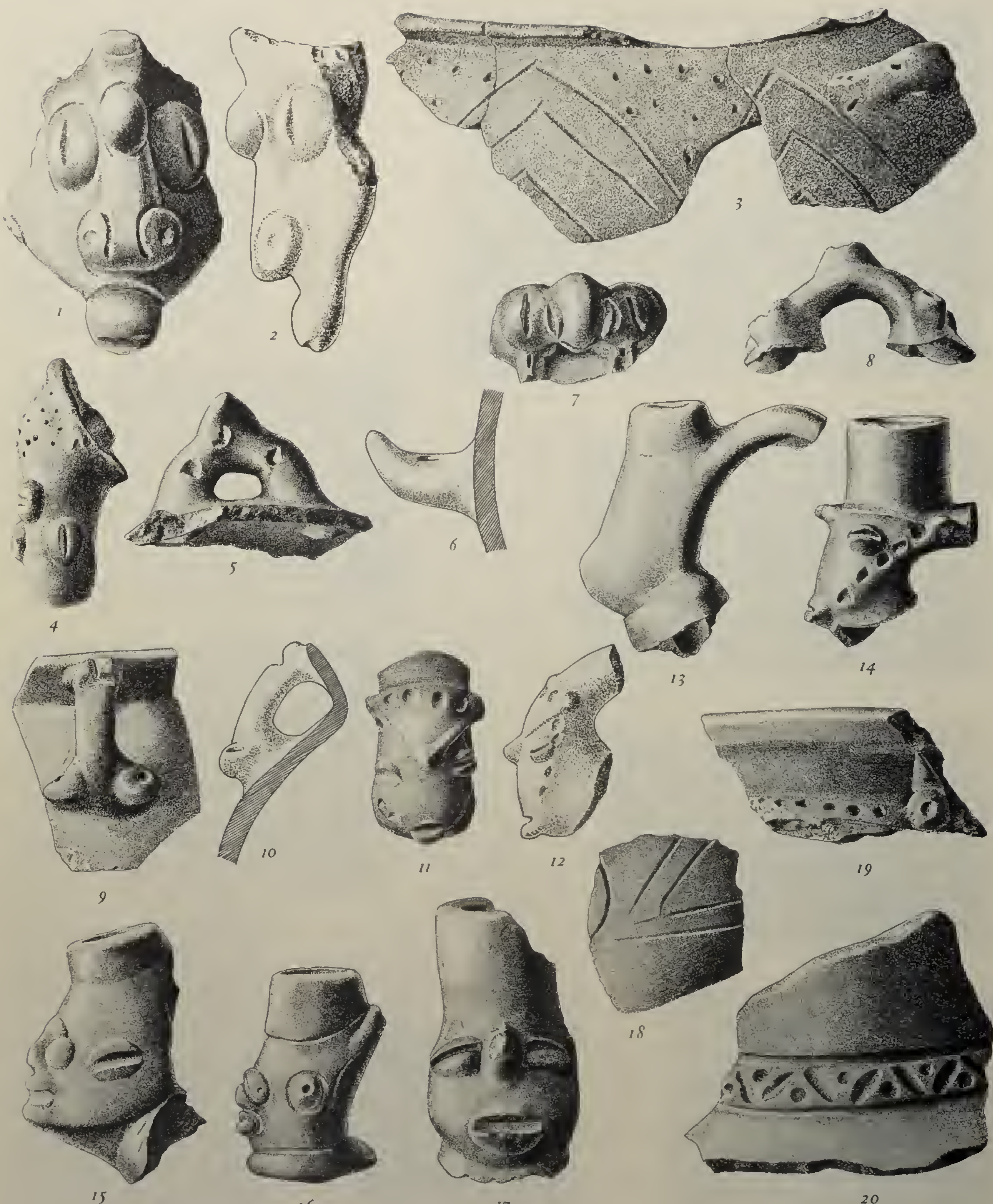


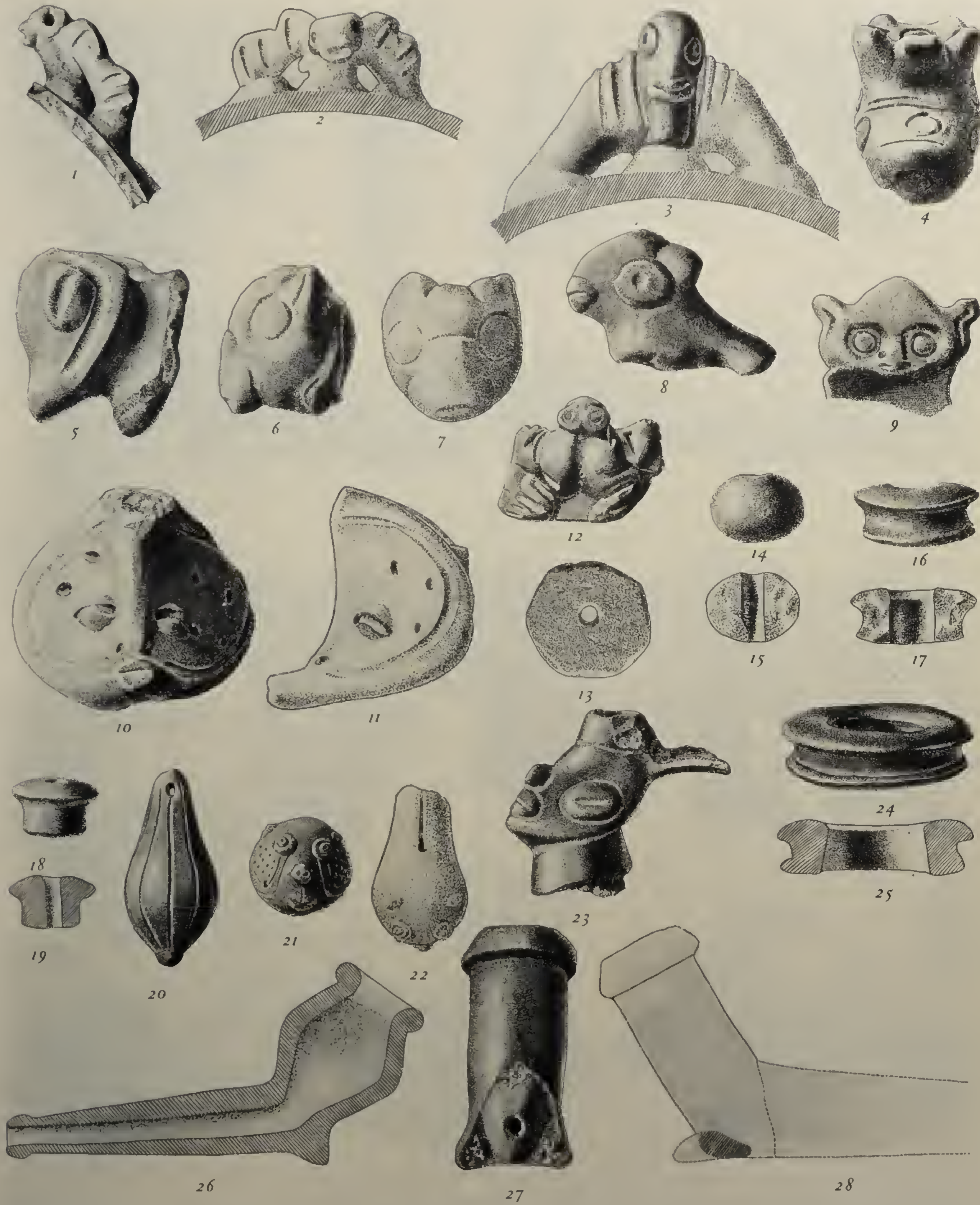
*8*

*9*

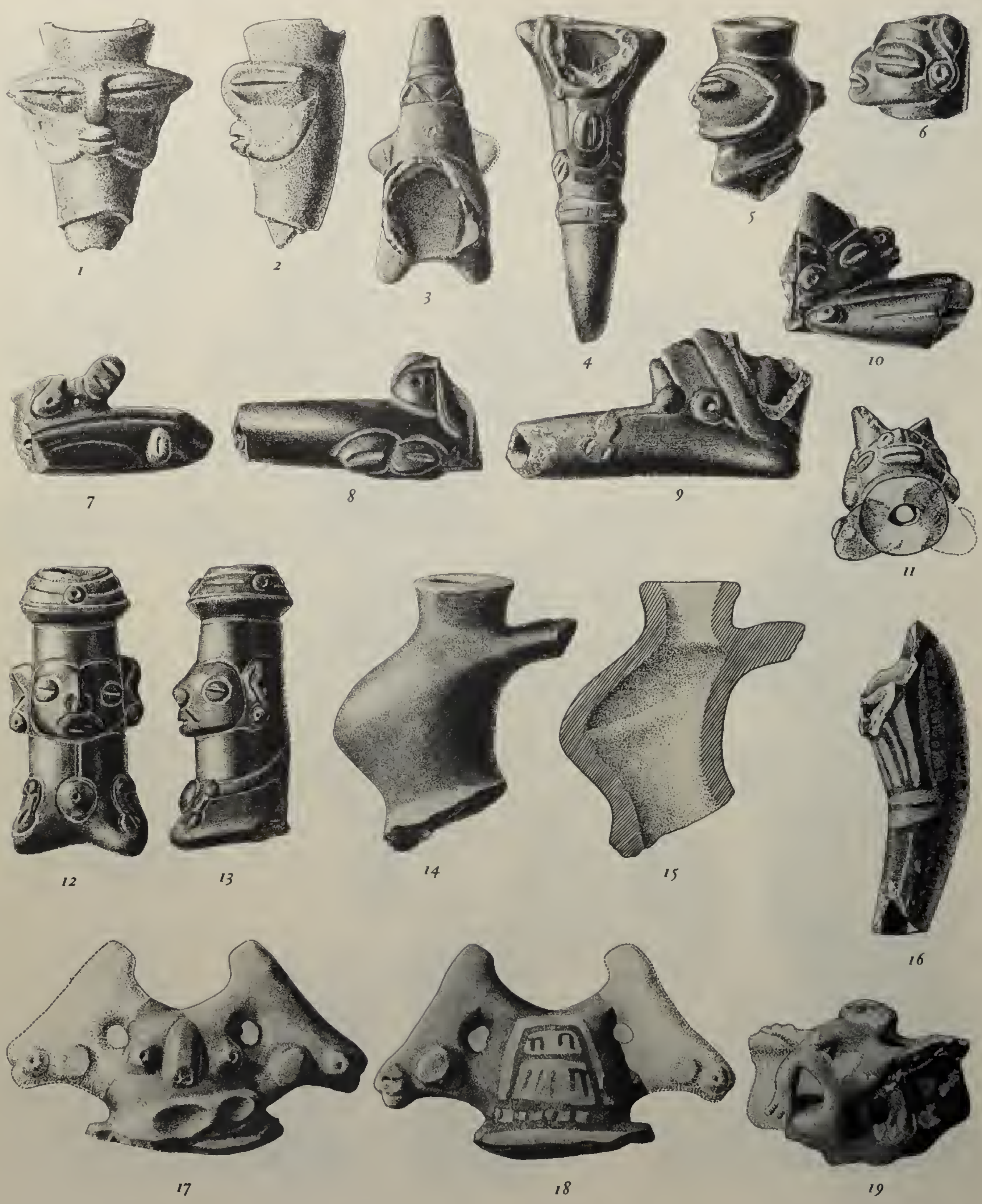
*1*, La Cabrera Peninsula, north side looking from the east; *2*, Los Tamarindos Trench, south wall; *3–8*, Los Tamarindos Burials: *3*, Burials 34 and 35; *4*, Burial 28, from west; *5*, Burial 9; *6*, Burial 19; *7*, interior of Burial 31; *8*, Burial 20; *9*, west trench, Burial 2.



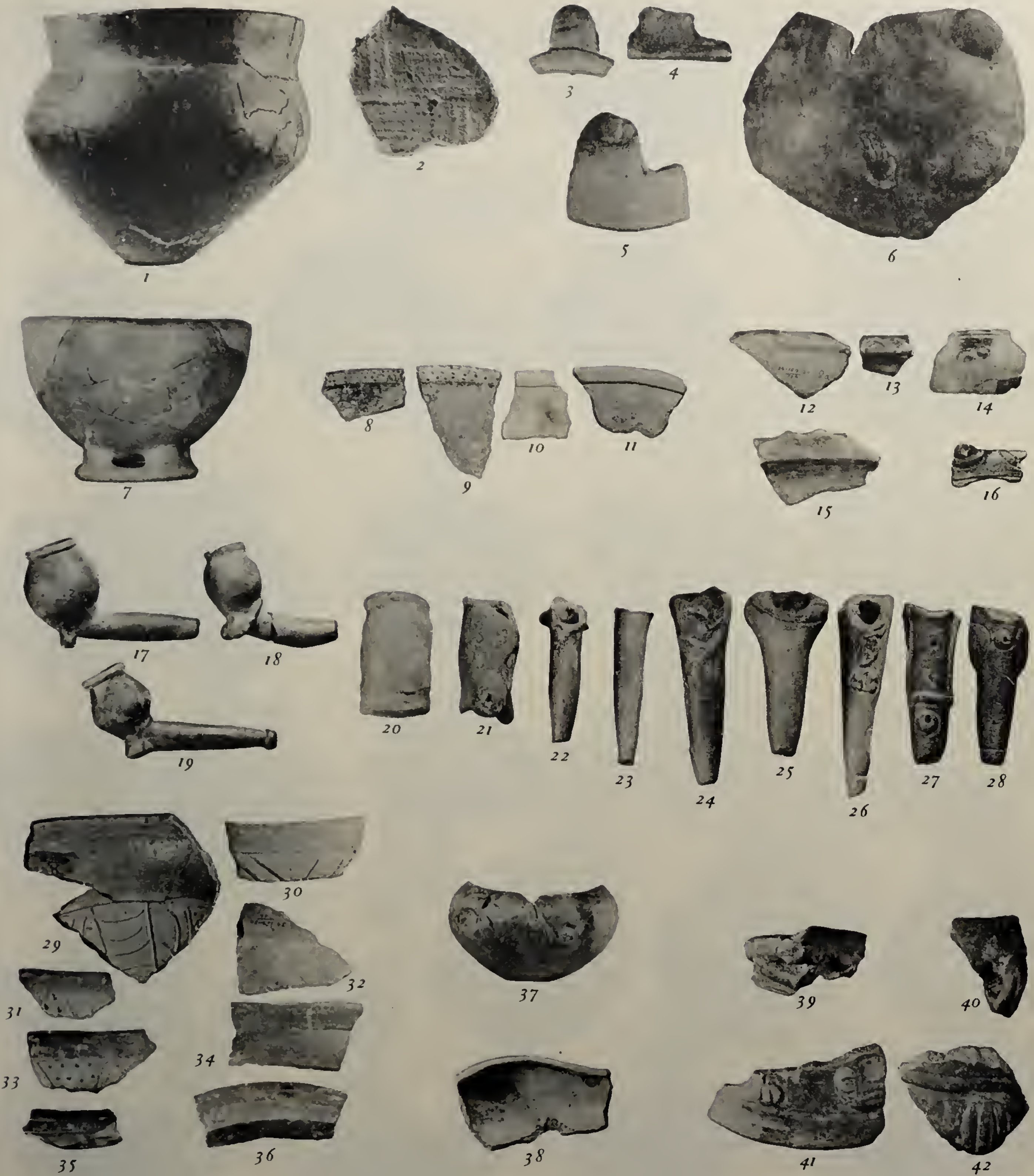
La Cabrera Plain ware. *1, 2*, vessel leg (?); *3*, incised and punctate jar sherd with handle; *4*, vessel leg; *5, 6*, handle, common type; *7*, handle, modeled bird head; *8*, handle, common type; *9, 10*, vertical handle; *11, 12*, modeled head on handle, non-functional, spout; *13*, plain spout; *14–17*, spouts with modeled faces; *18*, incised sherd; *19*, punctate sherd; *20*, incised and punctate sherd. Scale 1/2.



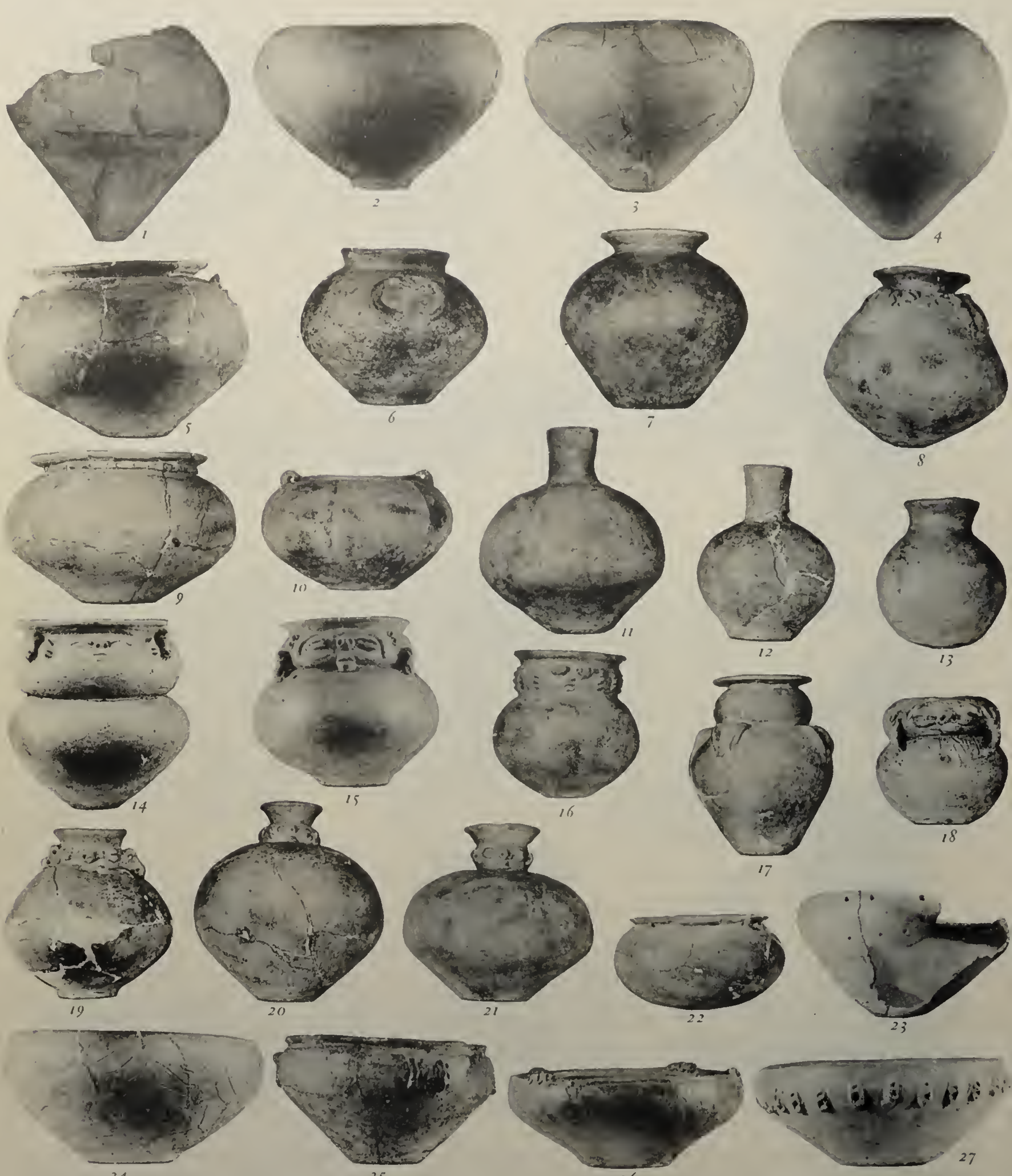
La Cabrera Plain and Polished Gray ware. La Cabrera Plain: *1–11*, side-wall adornos–*9*, rim adorno; *12*, frog adorno; *13*, drilled sherd; *14*, *15*, spindle whorl (?); *16*, *17*, ear-plug or spindle whorl (?); *18*, *19*, ear or cheek plug or spindle whorl (?); *20*, pendant; *21*, *22*, broken whistle. La Cabrera Polished Gray: *23*, vessel spout; *24*, *25*, ear-plug; *26*, pipe, in section; *27*, *28*, pipe bowl. Scale 1/2.



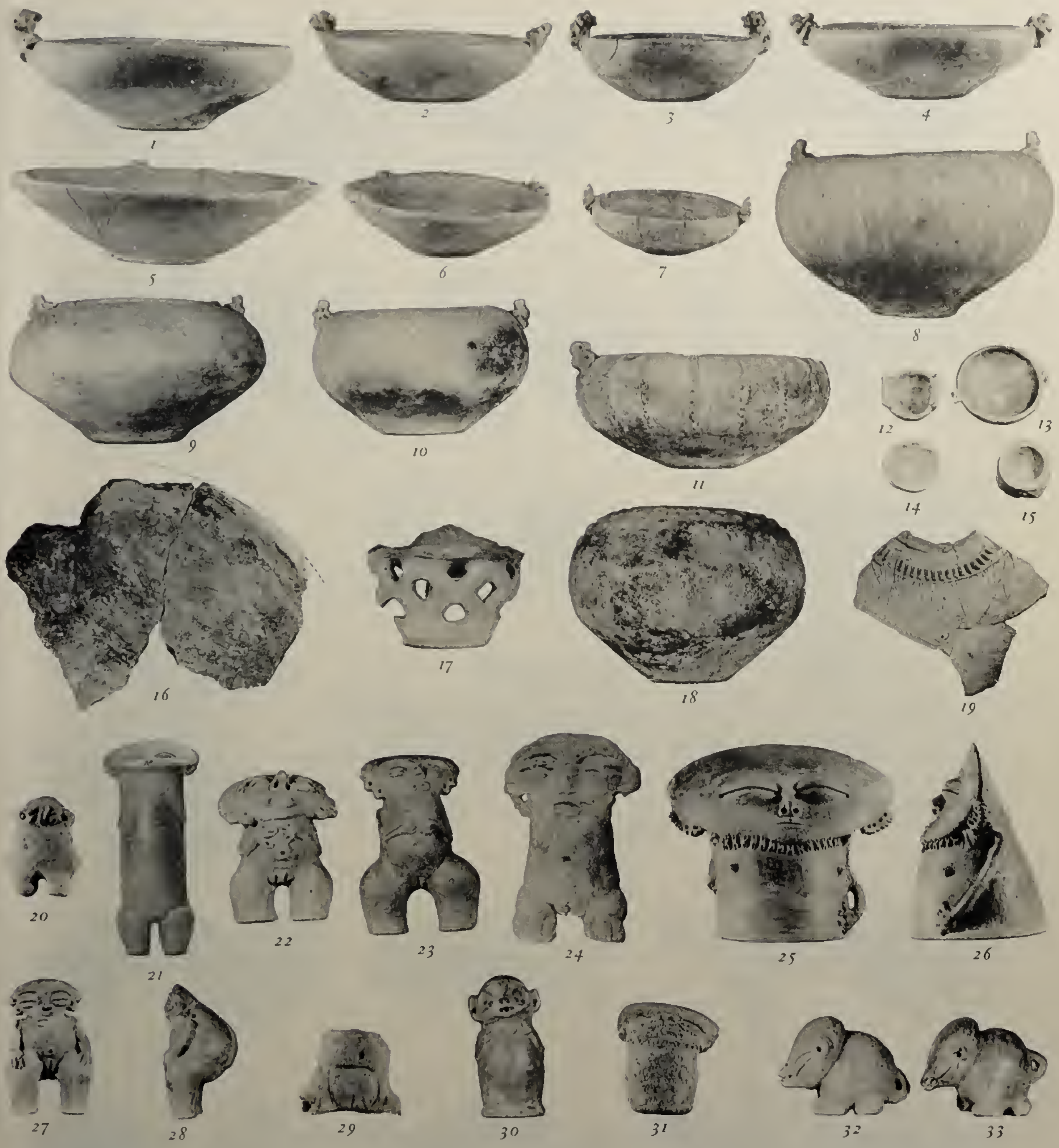
La Cabrera Polished Gray, La Cabrera Red and aberrant painted ware from Los Tamarindos lower levels. La Cabrera Polished Gray: *1*, *2*, decorated pipe bowl; *3*, *4*, decorated pipe stems, seen from above; *5*, decorated pipe bowl; *6*, decorated pipe bowl fragment; *7–11*, decorated pipe stem fragments, lateral views; *12*, *13*, decorated pipe bowl, some red paint in incisions. La Cabrera Red: *14*, *15*, spout. Aberrant painted: *16*, vessel leg; *17*, *18*, adorno; *19*, frog adorno. Scale 1/2.



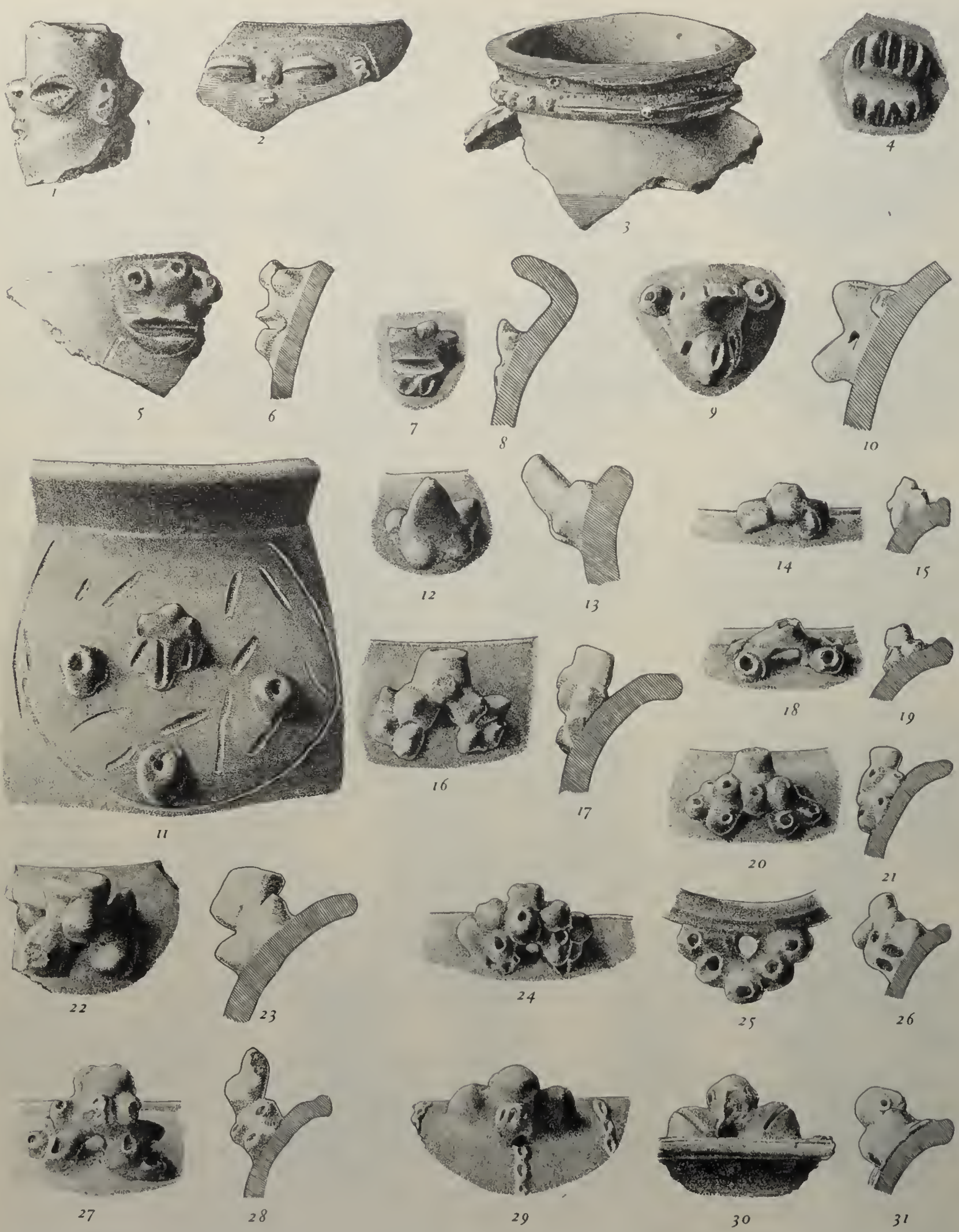
La Cabrera Plain, Polished Gray and Red wares. La Cabrera Plain: *1*, jar, maximum diameter 34.6 cm.; *2*, mat-impressed sherd, height, 9.5 cm.; *3–5*, leg-ring base fragments, width of *5*, 9 cm.; *6*, tetrapod basal sherd, width, 15 cm. La Cabrera Polished Gray: *7*, leg-ring base bowl, maximum diameter, 12.8 cm.; *8–11*, platter sherds, length of *9*, 8 cm.; *12–16*, modeled and incised sherds, length of *16*, 4.5 cm.; *17–19*, plain pipes, length of *19*, 13 cm.; *20*, *21*, plain pipe bowls; *22*, *23*, plain pipe stems, length of *22*, 8 cm.; *24–28*, decorated pipe stems, length of *28*, 8.5 cm. La Cabrera Red: *29–36*, incised and punctate sherds; *37*, bowl, maximum diameter, 10 cm.; *38*, bowl or dipper, length, 11 cm.; *39–42*, modeled sherds, length of *41*, 9 cm.; *40*, vertical handle.



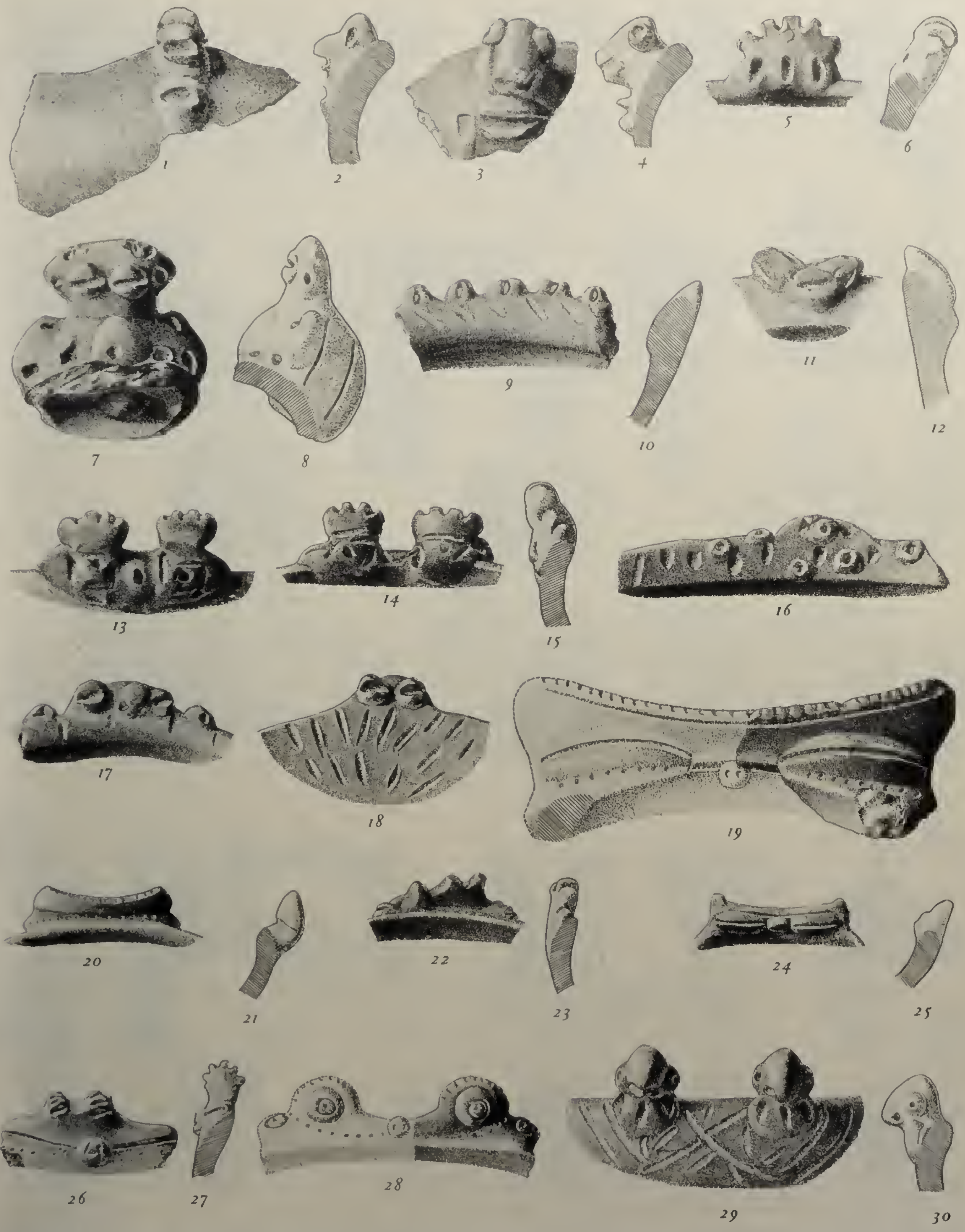
Valencia Red ware. Burial urns: *1*, maximum diameter 80 cm.; *2*, 60 cm.; *3*, 50 cm.; *4*, 58 cm. Jars: *5*, jar with low outcurved rim (see fig. 19, *1*); *6–10*, jars with low outcurved rims (see fig. 19, *7–10*, *14*); *11–13*, high neck jars *pimpinas* (see fig. 20, *1*, *2*, *8*); *14–21*, bulging neck jars (see fig. 21, *1–7*, *9*); *22*, globular round bottomed jar (see fig. 23). Bowls: *23*, *24*, bowl-urns, note crack-lacing on *23* (see fig. 25, *1*, *2*); *25*, *26*, open bowls with outcurved rims (see fig. 26, *1*, *2*); *27*, open bowl with slightly incurved rim (see fig. 27, *8*).



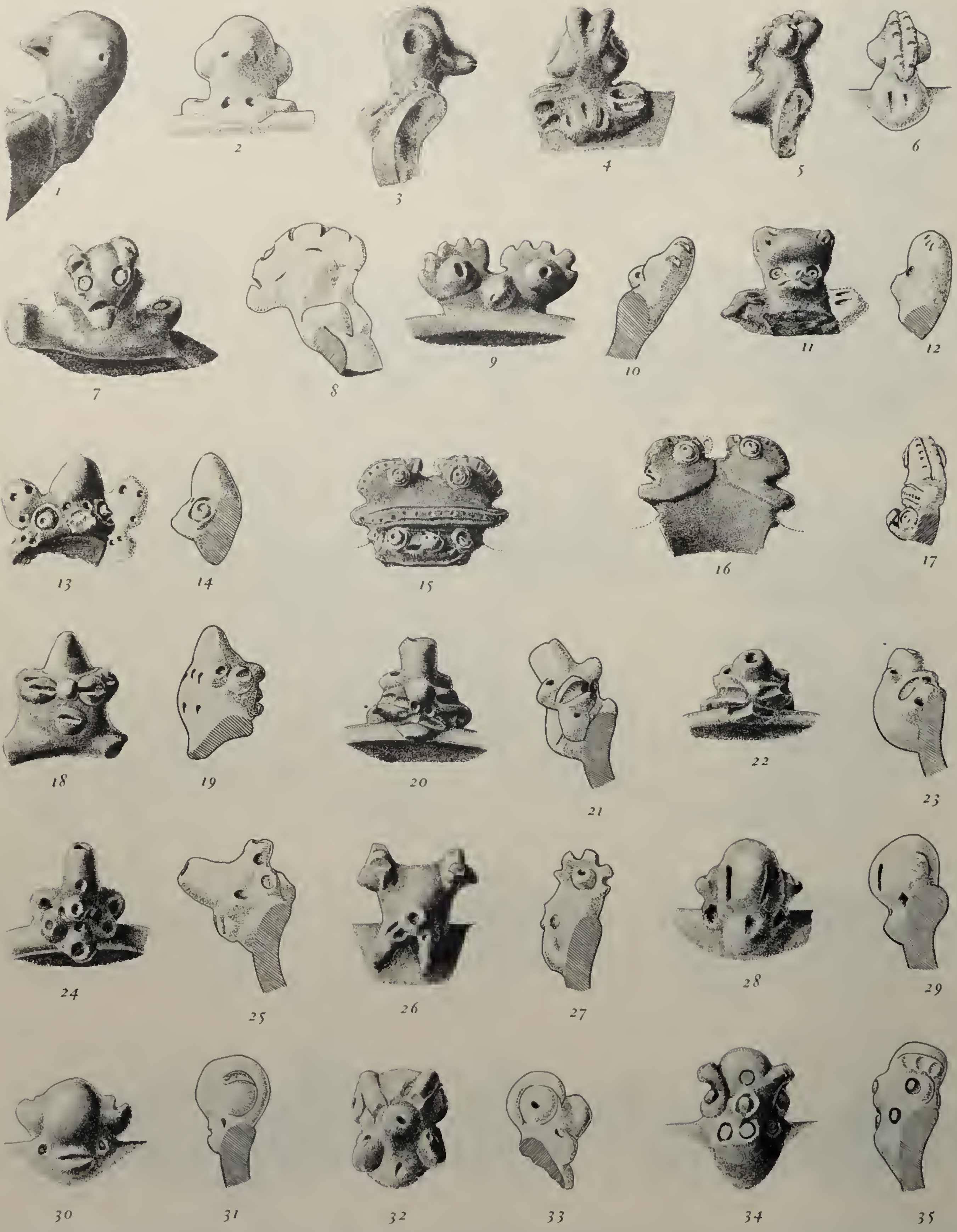
Valencia Red bowls, decorative elements and figurines. *1–4*, open bowls, with slightly incurved rims (see fig. 28, *9*, *12*, *15*, *16*); *5–7*, low, flat, open bowls (see fig. 29, *1*, *2*, *4*); *8–11*, incurved rim bowls (see fig. 30, *1*, *5*, *6*, *11*); *12–15*, miniature bowls; *16*, griddle fragment, upper side, maximum width, 40.5 cm.; *17*, latice, annular base, height, 8 cm.; *18*, lower half of bulging neck jar with massed nodes, maximum diameter 22 cm.; *19*, sherd with applique and incised decoration, probably from large jar, width, 22 cm.; *20*, figurine, solid, height 8.5 cm.; *21*, figurine, hollow, height, 46 cm.; *22*, figurine, hollow, height, 16.5 cm.; *23*, figurine, hollow, height, 13.5 cm.; *24*, figurine, hollow, height, 9.5 cm.; *25*, *26*, figurine head and upper body, hollow, width of head, 25 cm.; *27*, *28*, bent knee figurine, hollow, height, 12 cm.; *29*, spread-legged figurine fragment, hollow, width at navel, 6 cm.; *30*, spread-legged figurine, legs broken off, hollow, height, 13.5 cm.; *31*, flat bottomed figurine, height, 9.5 cm.; *32*, *33*, animal figurines, note stone teeth, length of *32*, 9 cm.



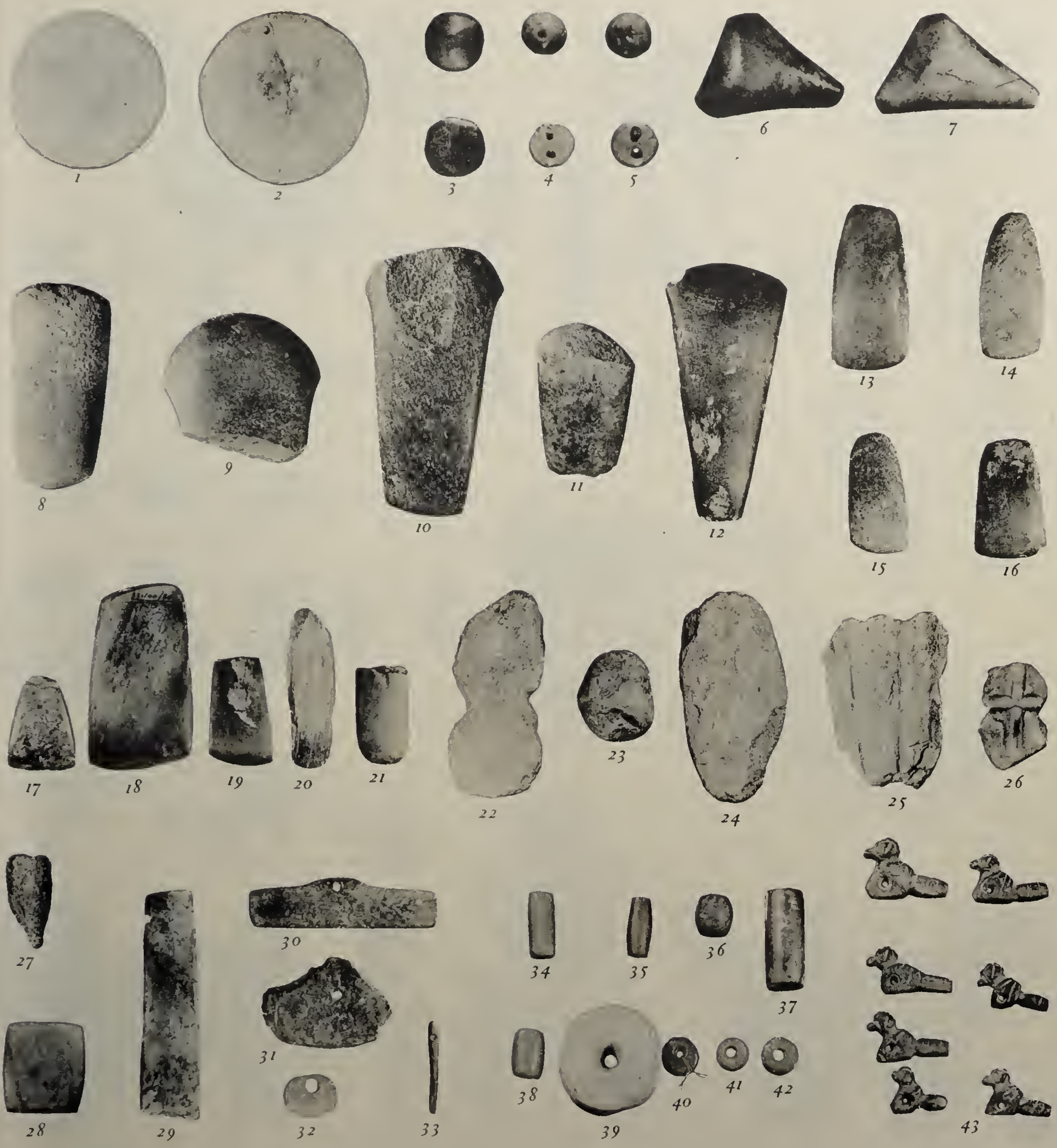
Valencia Red modeled decoration and adornos. *1*, spout fragment; *2*, sherd with modeled face and painted tears; *3*, jar neck with conventionalized face; *4–11*, side-wall adornos; *12–31*, handle adornos. Scale 1/2.



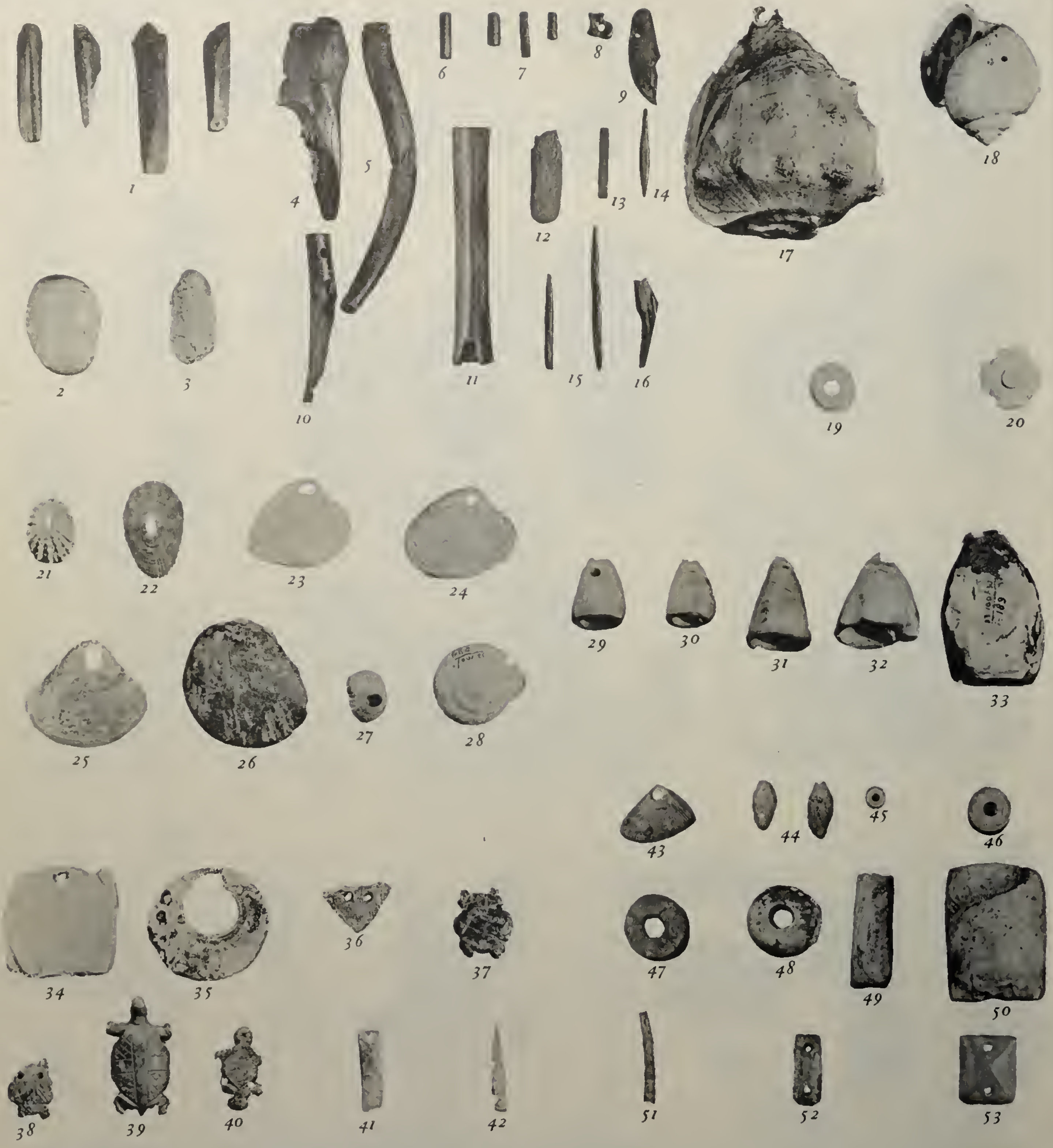
Valencia Red adornos. *1–4*, adorno heads, acing out, below rim; *7*, *8*, side-wall figurine adorno; *5*, *6*, *9–18*, rim projection adornos; *19–28*, wide rim adornos; *29*, *30*, paired head adornos.



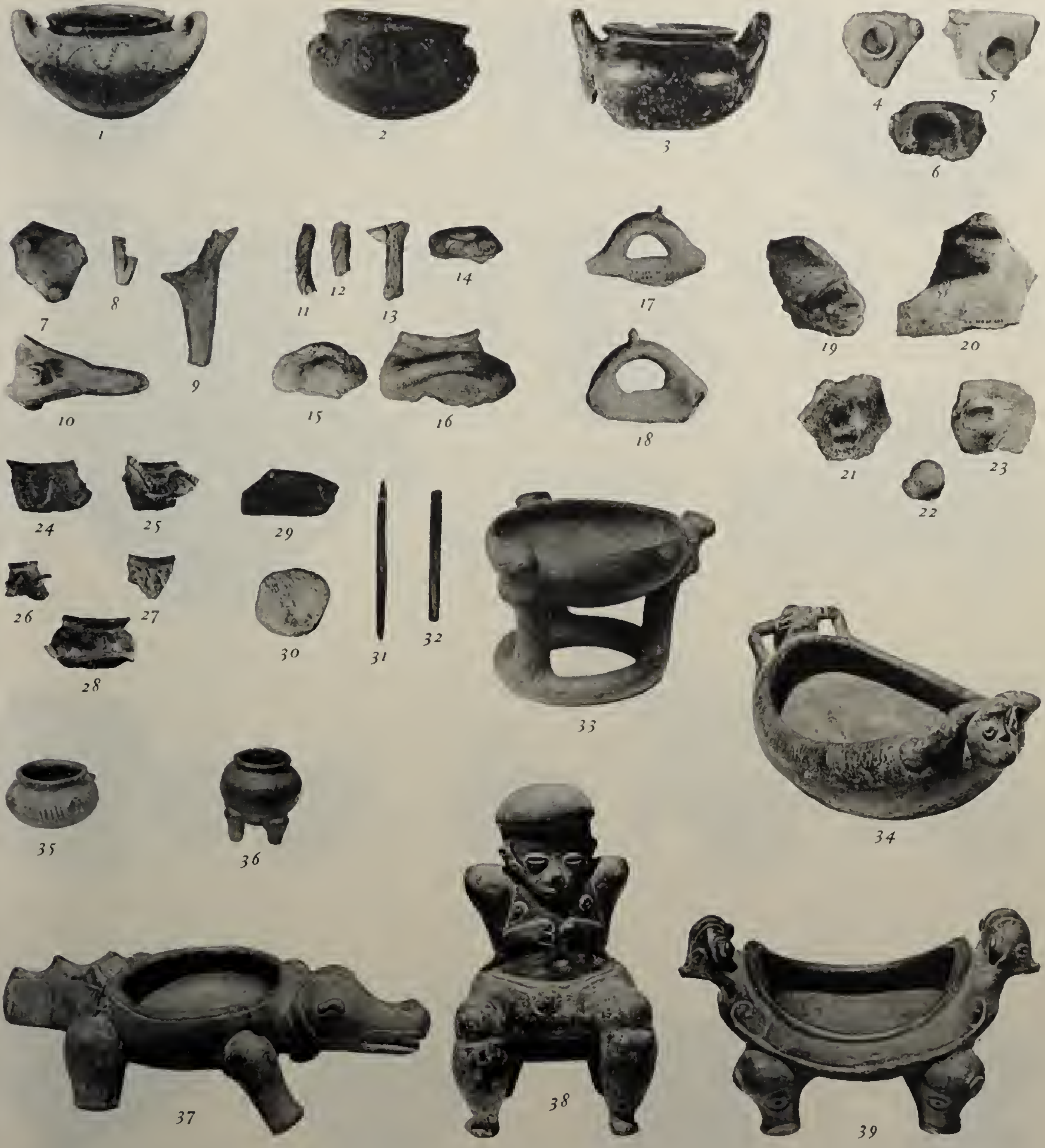
Valencia Red adornos. *1–10*, bird head adornos; *11–17*, bat head adornos; *18-25*, human head adornos; *26–35*, irregular knob adornos.



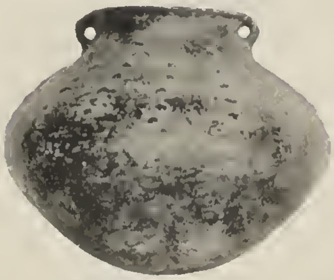
Pottery discs and stone objects, La Cabrera and Valencia Phases. *1, 2,* Valencia Phase unslipped pottery discs, diameter of *2,* 14 cm., *1,* same scale; *3–5,* stone buttons obverse and reverse, width of *5,* 1.8 cm., *3–5,* same scale; *6, 7,* triangular stones, La Ceiba Trench, length of *7,* 4.7 cm., *6,* same scale; *8–12,* large celts–*11, 12,* Valencia Phase; *8, 9, 10,* La Cabrera Phase, length of *10,* 15.5 cm., *8–12,* same scale; *13–21,* small celts–*19,* La Cabrera Phase; all others Valencia Phase, length of *18,* 9.5 cm., *13-21,* same sale; *22–28,* miscellaneous stone objects, Los Tamarindos–*22,* notched stone; *23,* hammer stone; *24,* grinding stone; *25, 26,* shaft straighteners or smoothers; *27,* stone with pointed end; *28,* tablet, length of *22,* 20 cm., *22–28,* same scale; *29–33,* stone pendants, Los Tamarindos–length of *29,* 12 cm., *29–33,* same scale; *34–42,* stone beads, Los Tamarindos–*35, 36,* pink quartzite, cylindrical; *37, 38,* serpentine and limestone, cylindrical; *39–42,* discoidal; *39,* quartzite, width, 3.5 cm., *34–42,* same scale; *40,* serpentine; *41, 42,* limestone; *43,* bird effigies, greenish sericite.



Objects of stone, bone and shell, La Cabrera and Valencia Phases. *1–3*, miscellaneous stone objects: *1*, worked sericite; *2*, quartzite pebble, length, 6 cm.; *3*, crystal. *4–16*, miscellaneous worked bone objects: *4*, chisel; *5*, antler punch (?); *6*, *7*, beads; *8*, drilled fox astragulus; *9*, drilled jaguar canine; *10*, *11*, worked deer bones, problematical; *12*, *13*, spatulate objects; *14*, *15*, spikes; *16*, ground peccary tooth. *17–20*, miscellaneous shell objects: *17*, Valencia Phase; *18–20*, probably the same, length of *17*, 13.5 cm., *17–20*, same scale. *21–28*, pierced whole shells, Valencia Phase: holes in *21* and *22*, natural, height of *26*, 5.5 cm., *21–28*, same scale. *29–33*, shell tinkler pendants, La Cabrera and Valencia Phases: height of *33*, 6.5 cm., *29–33*, same scale. *34–42*, cut-shell pendants, Valencia Phase: height of *34*, 4.4 cm., *34–42*, same scale. *43–53*, shell beads: *43*, *44*, La Cabrera Phase; *52*, *53*, Valencia Phase; others occur in both Phases; *43*, *44*, pierced whole shell; *45–48*, discoidal; *49–51*, cylindrical; *52*, *53*, button-like objects.



Carache Plain Red ware, Carache stone and bone objects and pottery from Cave of Santo Domingo. Carache Plain Red ware: *1–3*, small jars, ca. 1/6; *4–6*, incensario fragments, width of *6*, 9.5 cm.; *7–10*, solid legs, length of *10*, 15 cm.; *11–16*, loop handles, length of *11*, 7 cm.; *17*, *18*, flat handles probably from platters, or griddles, width of *17*, 13.5 cm.; *19–23*, heavy lug handles, width of *21*, 10 cm.; *24–28*, applique strip decoration–width of *24*, 9 cm. Carache stone and bone: *29*, broken pendant; *31*, *32*, slate-pencil stones; *30*, cranial amulet, length, *30*, 10 cm. Cave of Santo Domingo: *37*, plain red ware alligator vessel, 1/4; *39*, dark brown ware tetrapod double headed effigy vessel, 1/4; *33*, painted hollow leg-ring base bowl, 1/4; *35*, *36*, miniature jars, 1/4; *34*, plain brown ware bowl with pair of heads, 1/4; *38*, painted hollow male figurine, seated on stool, 1/4. *2*, Courtesy of the American Museum of Natural History.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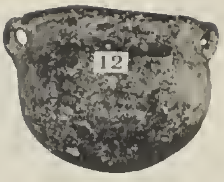
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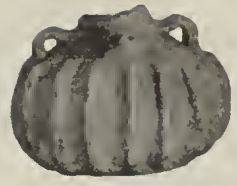
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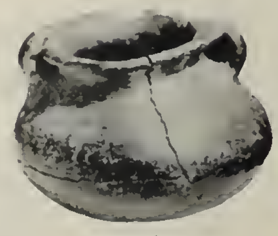
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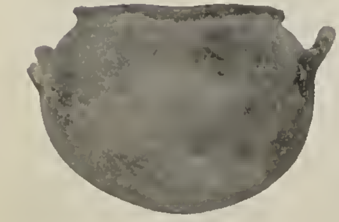
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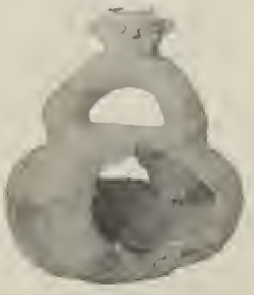
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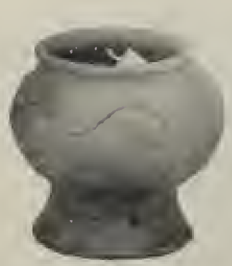
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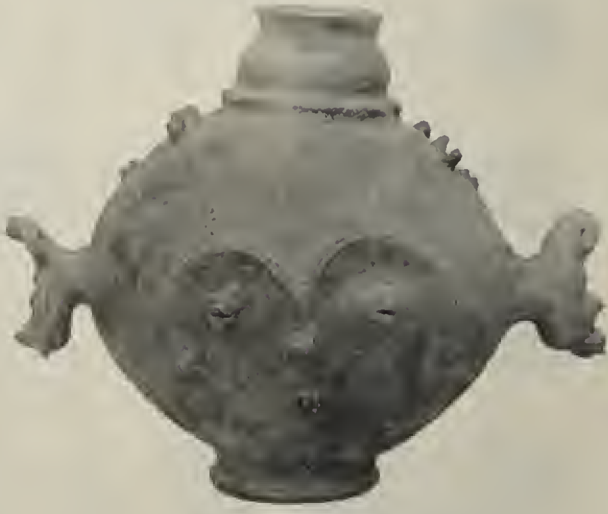
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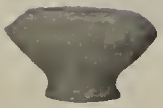
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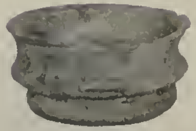
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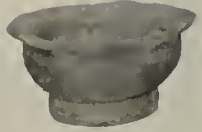
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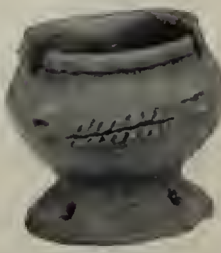
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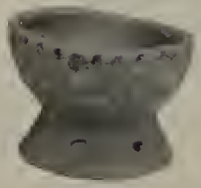
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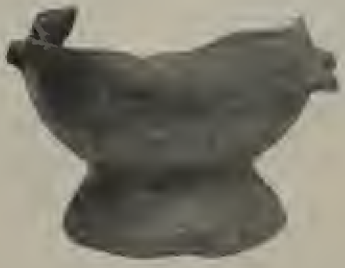
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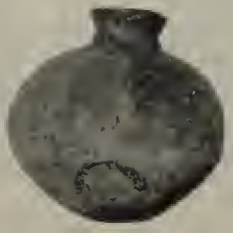
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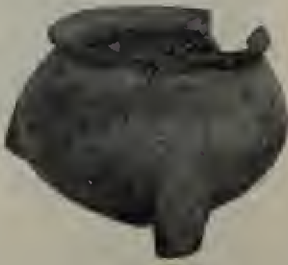
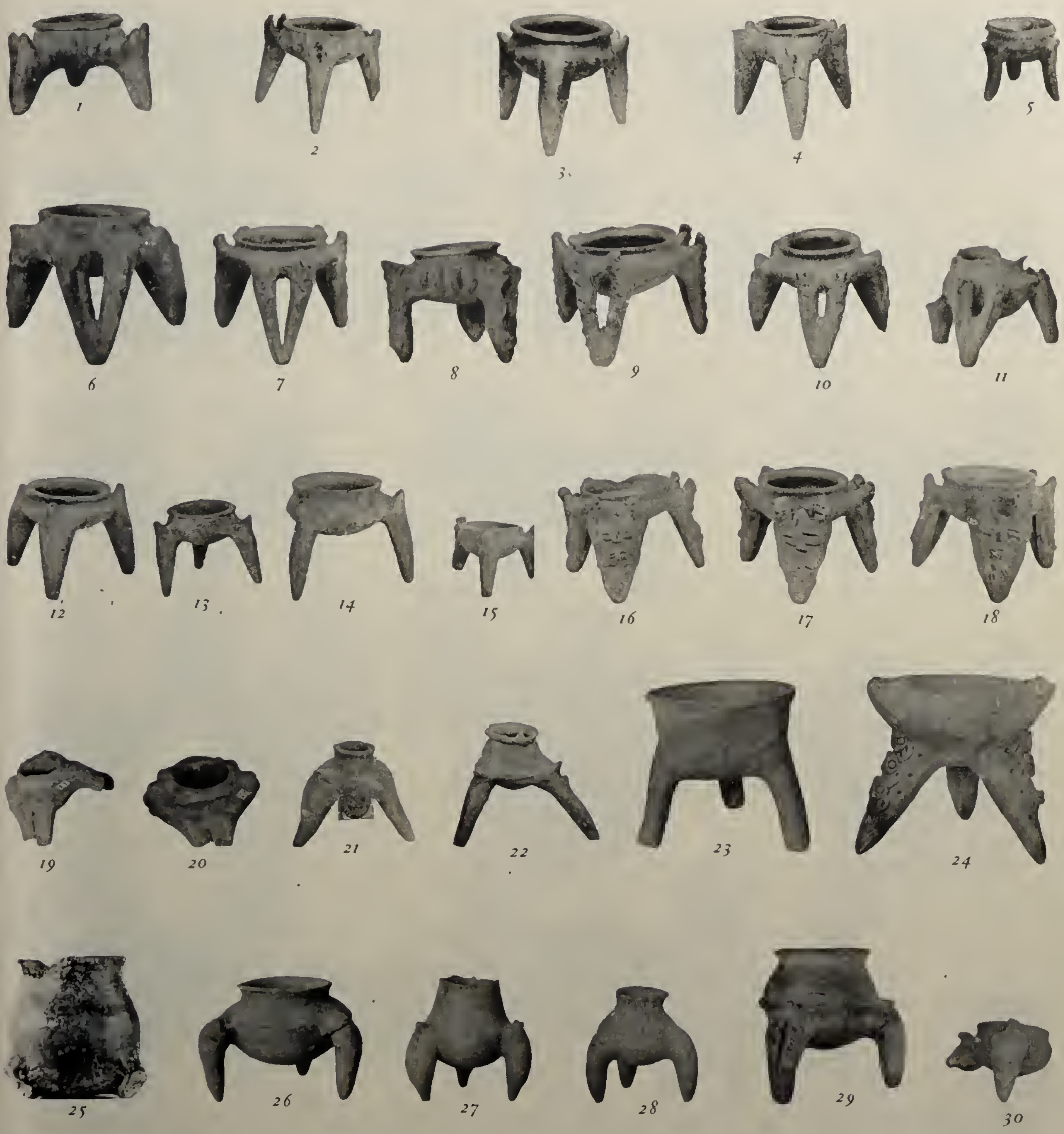
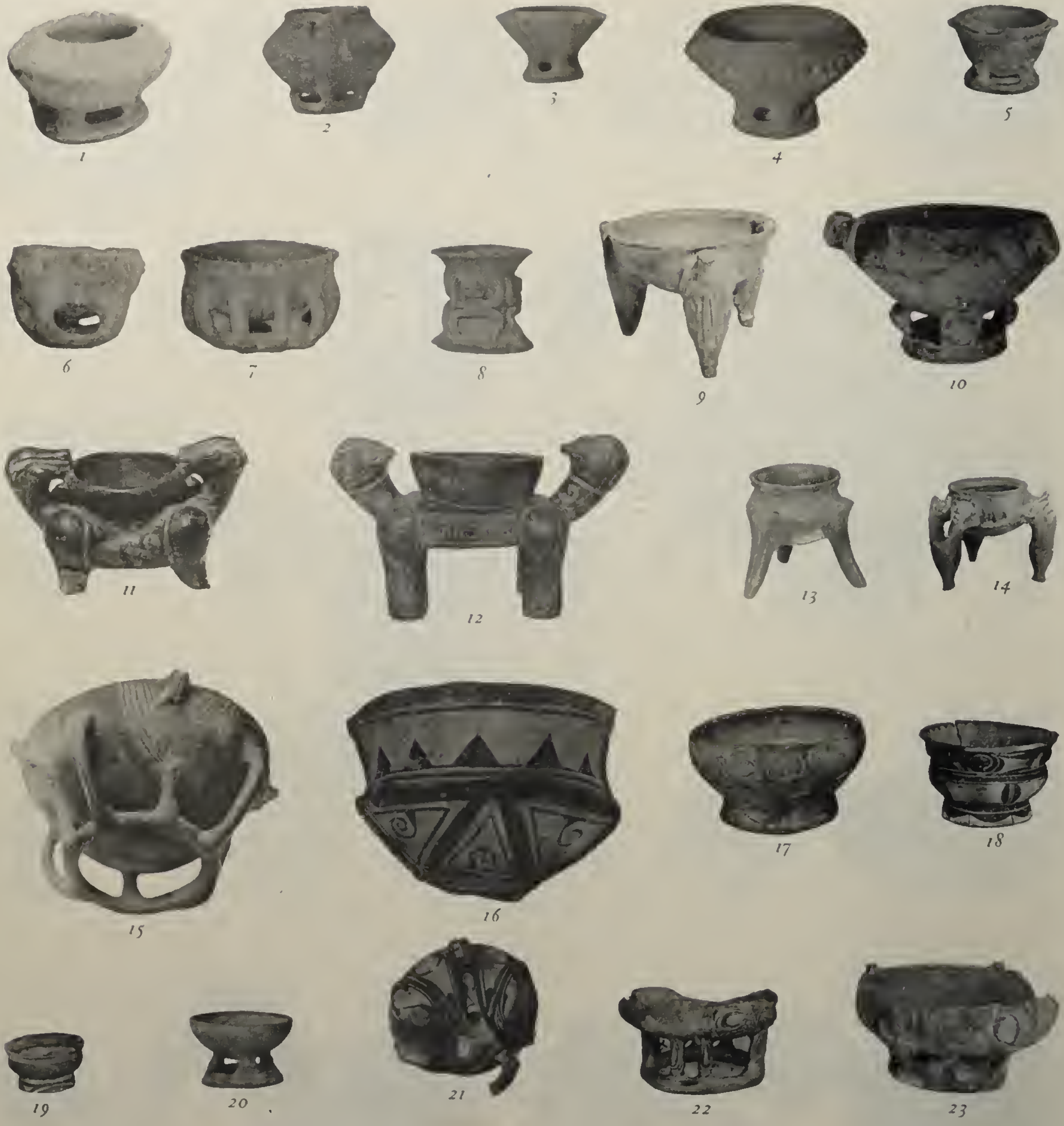

*17*

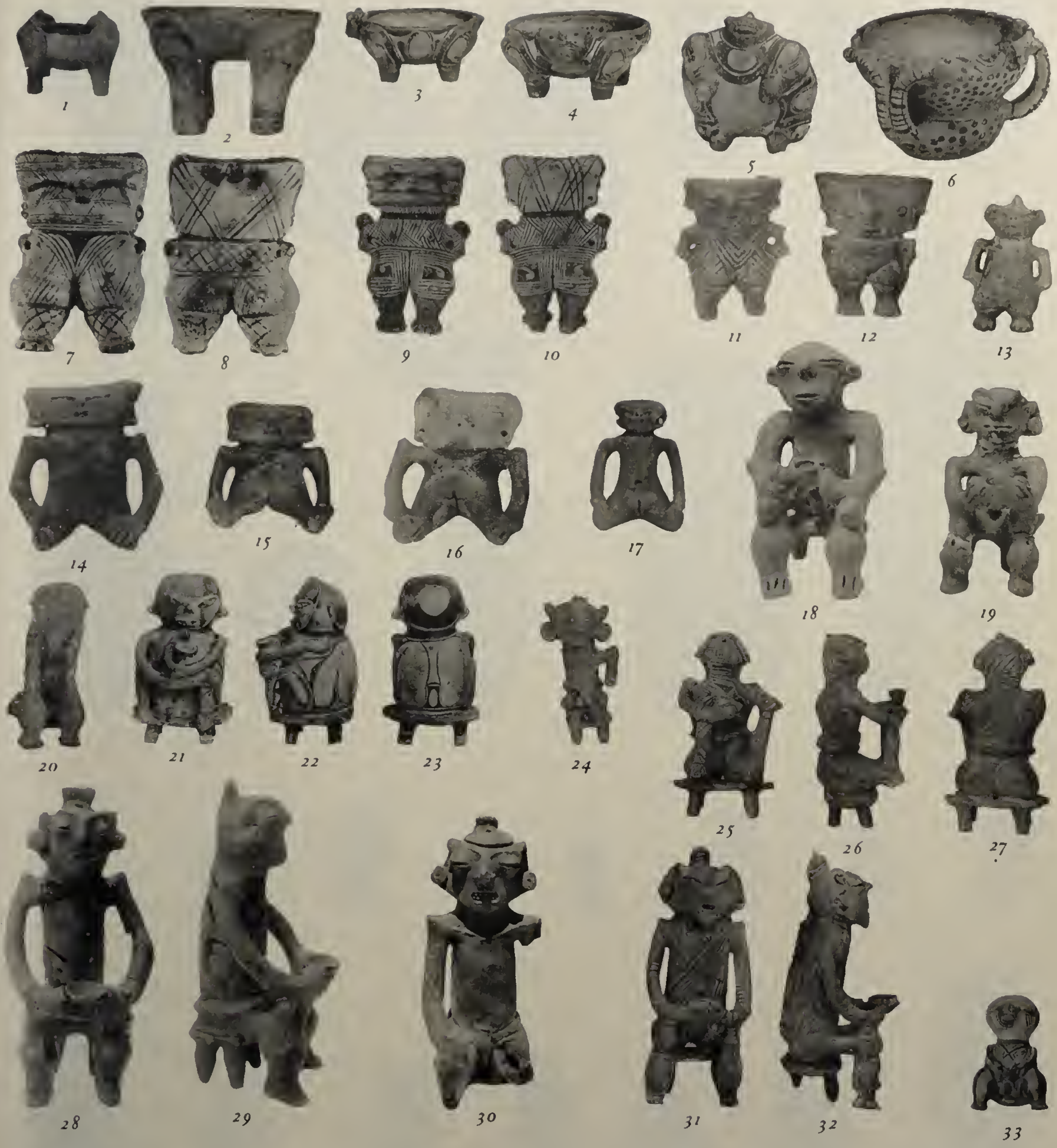
Western plain ware. *1–5*, simple jars–*1–3*, Distrito Tocuyo, Lara, slightly less than 1/4; *4*, Santa Ana, Lara, ca. 1/6; *5*, Distrito Bocono, Trujillo, ca. 1/8; *6*, stirup-spouted jar, Distrito Tocuyo, Lara, ca. 1/6; 7, *8*, annular base jars–7, Paramo Mucuchies, Merida, ca. 1/6; *8*, Distrito Torondoy, Merida, ca. 1/10; *9–15*, annular base bowls–*9*, Cerro Manzano, Lara, ca. 1/6; *10*, Distrito Tocuyo, Lara, ca. 1/6; *11*, *12*, Distrito Bocono, Trujillo, ca. 1/8; *13–15*, Paramo Mucuchies, Merida, ca. 1/6; *16*, *17*, large tripod vessels, legs broken off–*16*, Distrito Tocuyo, Lara, ca. 1/6; *17*, Distrito Bocono, Trujillo, ca. 1/6. *1*, *2*, *3*, *10*, *16*, Courtesy of the American Museum of Natural History.



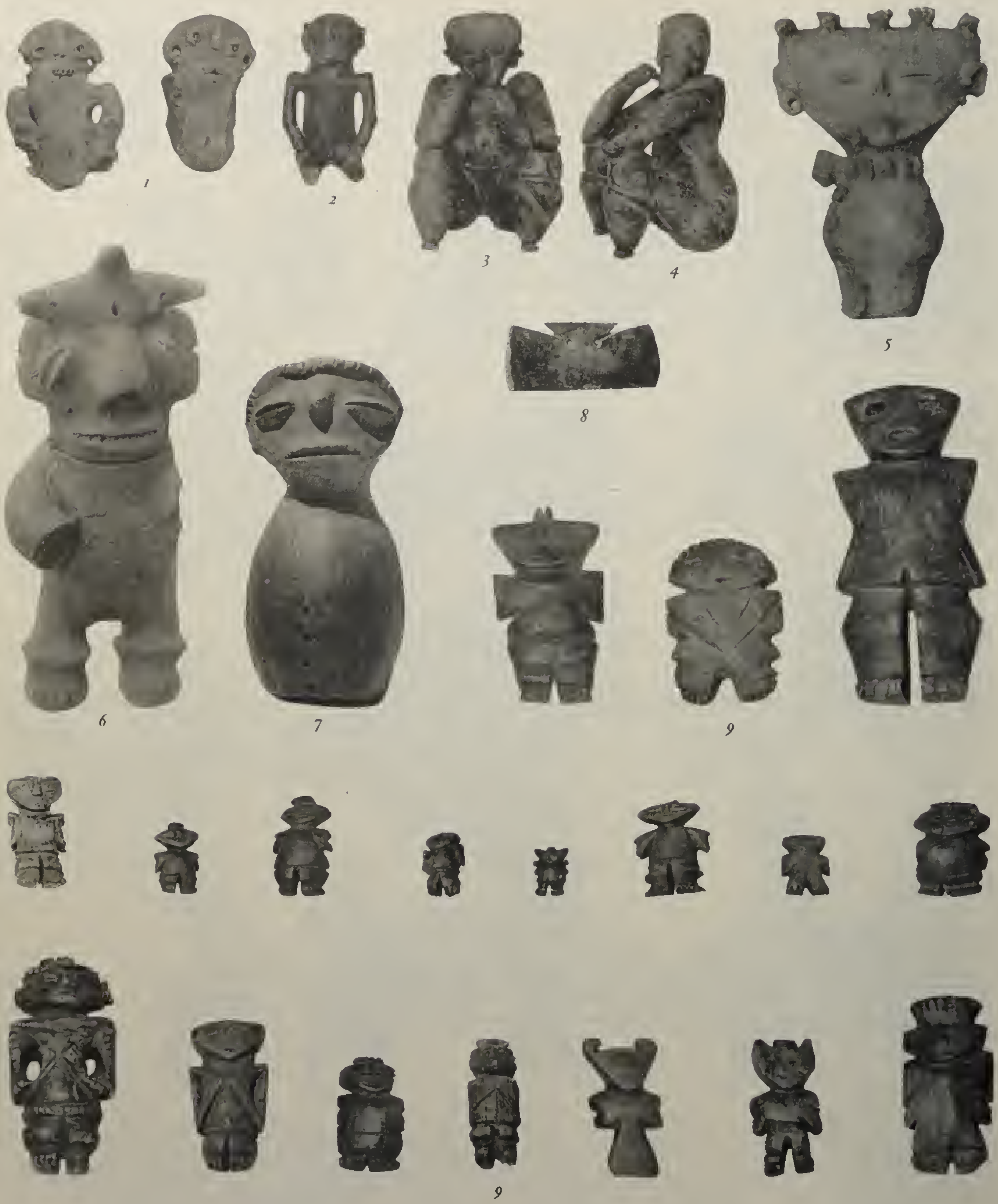
Western plain ware, tripod vessels. *1–5*, solid eared leg tripod vessels–*1*, Niquitao, Trujillo; *2*, *4*, *5*, Distrito Bocono, Trujillo; *3*, Tuname, Distrito Urdaneta, Trujillo, all ca. 1/4; *6–11*, "V" leg tripod vessels–*6*, *8*, Niquitao, Trujillo; *9*, Tuname, Distrito Urdaneta, Trujillo; *10*, Paramo Timotes, Merida; *11*, Cerro Manzano, Lara, all ca. 1/4; *12–15*, single ear leg tripod vessels–*12*, Tuname, Distrito Urdaneta, Trujillo; *13*, *15*, Distrito Bocono, Trujillo, all ca. 1/4; *16–18*, mask leg tripod vessels–*16*, Distrito Bocono, Trujillo; *17*, *18*, Tuname, Distrito Urdaneta, Trujillo, all ca. 1/4; *19–22*, incensarios–*19*, *20*, Distrito Tocuyo, Lara; *21*, Distrito Urdaneta, Trujillo; *22*, Paramo La Vegita, Distrito Bocono, Trujillo; *23–25*, solid leg tripod vessels–*23*, Niquitao, ca. 1/6; *24*, Distrito Bocono, Trujillo, ca. 1/6; *25*, Zumbador, Lara, legs broken off, height, 7 cm.; *26–30*, hollow leg tripod vessels–*26*, *28*, Cerro Manzano, Lara, ca. 1/6; *29*, Distrito Tocuyo, Lara, ca. 1/4; *30*, Distrito Bocono, Trujillo, ca. 1/6. *1*, *6*, *8*, *23*, *25*, Courtesy of the Museum of the American Indian, Heye Foundation. *19*, *20*, *29*, Courtesy of the American Museum of Natural History.



Western plain and painted vessels. *1–7*, leg-ring base vessels–*1*, Santa Ana, Lara, height, 8 cm.; *2*, *3*, Cerro Manzano, Lara, height of *2*, 10 cm., of *3*, 8 cm.; *4*, *6*, 7, Distrito Tocuyo, Lara, height of *4*, 8 cm., width of *6*, 7, 9 cm.; *5*, Distrito Bocono, Trujillo, height, 7 cm.; *8*, pot-stand, Cerro Manzano, Lara, ca. 1/8; *9*, western dark on plain tripod bowl, Santa Ana, Lara, ca. 1/6; *10*, western dark on plain leg-ring base vessel, Distrito Tocuyo, Lara, ca. 1/8; *11*, *12*, western dark on plain tetrapod effigy vessels, probably from State of Trujillo, ca. 1/6; *13*, western white on unslipped ware tripod vessel, Niquitao, Trujillo, ca. 1/4; *14–16*, western red on white ware–*14*, tripod, Distrito Bocono, ca. 3/16; *15*, leg-ring base bowl, rim diameter 30 cm.; *16*, bowl, annular base broken off, Distrito Tocuyo, Lara, ca. 1/4; *17–19*, western black on white ware annular base bowls–*17*, Distrito Urdaneta, Trujillo; *18*, *19*, Distrito Bocono, Trujillo, all ca. 1/8; *20–23*, western black on white ware leg-ring base bowls–*20*, Cerro Manzano, Lara, ca. 1/10; *21*, Tuname, Distrito Urdaneta, Trujillo, ca. 1/8; *22*, *23*, Distrito Bocono, Trujillo, ca. 1/8. *6*, *10*, *16*, Courtesy of the American Museum of Natural History. *4*, 7, *12*, Courtesy of the Museum of the American Indian, Heye Foundation.



Western black on white vessels and Andean figurines. *1*, *2*, Western black on white ware tetrapod bowls, State of Trujillo–*1*, ca. 1/5, *2*, ca. 1/3; *3*, *4*, *5*, western black on white tetrapod effigy bowl, Tuname, Distrito Urdaneta, Trujillo, *5*, ca. 1/4; *3*, *4*, same scale; *6*, western black on white false bottom bowl, Betijoque, Trujillo, ca. 1/3; *7–12*, female figurines, standing, quadrilateral corded heads–*7*, *8*, Laguna Niquitao, Distrito Bocono, Trujillo, height, 17, cm.; *9*, *10*, Distrito Tocuyo, Lara, height 21 cm.; *11*, Distrito Bocono, Trujillo, ca. 1/4; *12*, Niquitao, height, 16 cm.; *13*, female figurine, standing, crested head, Andean region, ca. 1/5; *14–16*, female figurines, sitting, quadrilateral corded heads–*14*, Distrito Valera, Trujillo, ca. 1/5; *15*, *16*, Distrito Tocuyo, Lara, ca. 1/5; *17*, female figurine, sitting, oval head, State of Trujillo, ca. 1/5; *18-23*, male figurines, seated on stools, oval or round heads–*18*, *19*, State of Trujillo, ca. 1/3; *20*, Distrito Bocono, Trujillo, ca. 1/9; *21*, *22*, *23*, Tuname, Distrito Urdaneta, Trujillo, all ca. 1/3; *24–32*, male figurines, seated on stools, crested heads–*25*, *26*, *27*, Distrito Tocuyo, Lara, all ca. 1/6; *28*, *30*, State of Trujillo, *28*, ca. 1/3; *30*, ca. 1/5; *31*, *32*, Distrito Campo Elia, Merida, ca. 1/3; *33*, male figurine, seated, without stool, State of Lara, ca. 1/3. *1*, *2*, *9*, *10*, *12*, *13*, *15*, *16*, *25*, *26*, *27*, Courtesy of the Museum of the American Indian. Heye Foundation.



Andean figurines and stone work. *1–5*, figurines of uncertain sex, sitting–*1*, Chiguara Distrito Suere, Merida, ca. 1/4; *2*, probably Andean, ca. 1/6; *3*, *4*, State of Trujillo, ca. 1/8; *5*, State of Lara, ca. 1/4; *6*, figurine of uncertain sex standing, State of Trujillo, ca. 3/8; 7, figurine, uncertain sex, La Ceiba, on Lake Maracaibo, ca. 3/8; *8*, broad-winged stone ornament, Distrito Boeono, Trujillo, length, 9.2 cm.; *9*, small stone figurines, Andean area. *2*, *3*, *4*, Courtesy of the Museum of the American Indian, Heye Foundation.

# THE BORUCA OF COSTA RICA

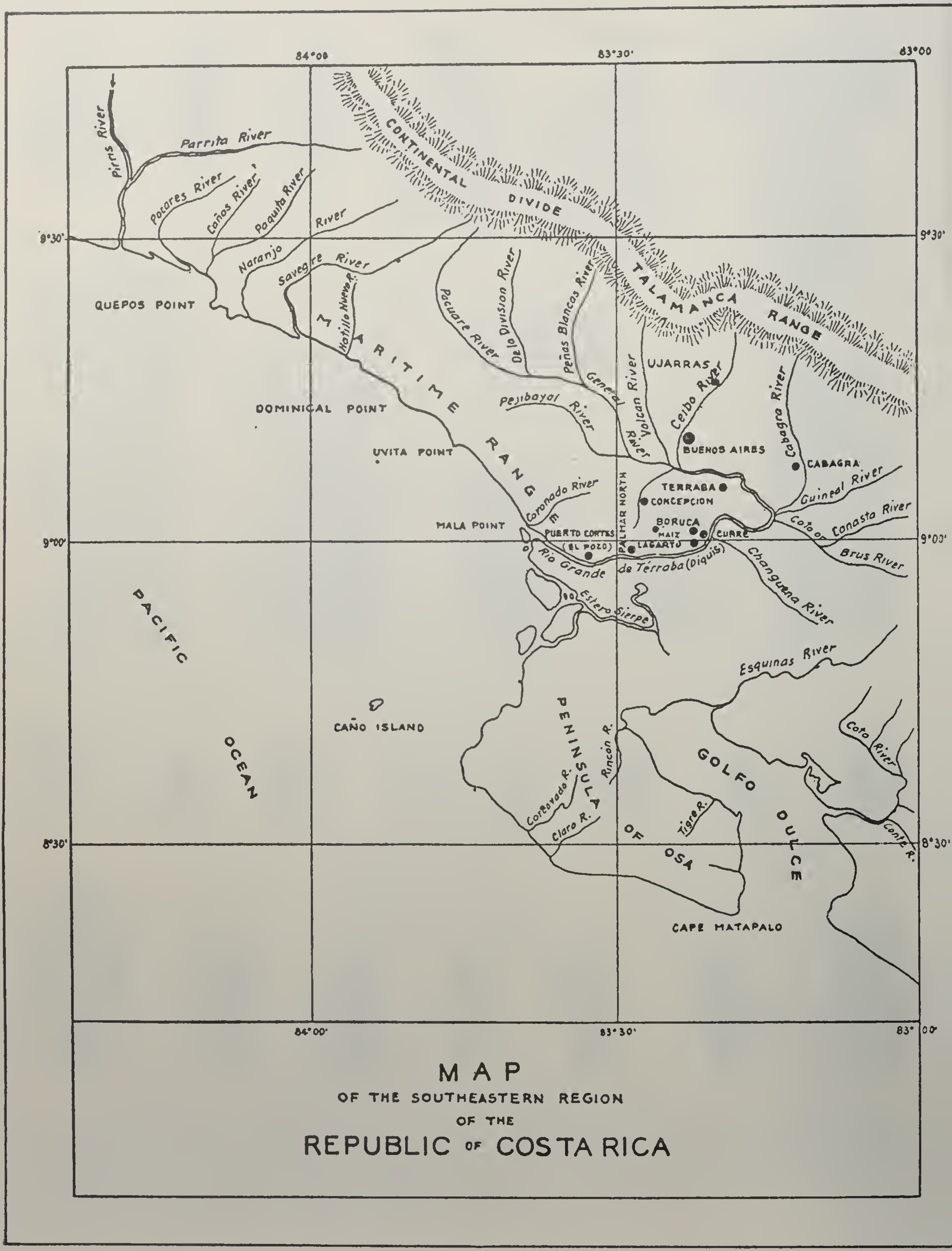


Fig. 1. Map of the southeastern region of the Republic of Costa Rica.

PAPERS
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# THE BORUCA OF COSTA RICA

BY

DORIS Z. STONE

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# FOREWORD

THE following paper on the present-day *Boruca* Indians of southeastern Costa Rica is not a complete ethnological study. In fact, it might well be termed an "introductory paper" on these people. It is the result of four short visits into Boruca territory. The first trip was made with the idea of becoming acquainted with these people, and the remaining three visits were made to study the conditions under which the greater portion of autochthonous Costa Ricans exist today. The purpose in mind was to understand the new problems created by the first steps in constructing the Pan-American Highway. The line of the proposed highway goes between *Térraba* and *Cabécar* Indian country, and indirectly affects the *Bribri* and the *Boruca.* With its start, came the flood of opportunists to claim lands that are actually occupied by indigenous groups, many of whom do not even speak the national tongue, Spanish.

As a result of these field trips, the Costa Rican Government set up, on December 6, 1945, a *Junta* or Committee to form a long-term educational program and to demarcate various aboriginal zones to be used as reservations.

Little or nothing has been written about the *Boruca*, who are by far the most Europeanized of the southern Costa Rican tribes, and who, because of this, are fast losing their aboriginal characteristics. The report which follows is a series of facts concerning the life of the actual *Boruca* Indians; facts which, in a few years, may be obsolete or unknown. For this reason, they are offered here as part of the record of our knowledge of man's cultural changes, and, as stated before, do not pretend to represent a thorough ethnological study.

Doris Stone

*San José, Costa Rica, 1946*

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# THE BORUCA OF COSTA RICA

## GEOGRAPHY

THE country of the *Boruca* lies in the southeastern section of Costa Rica (see fig. 1, frontispiece) starting from the upper end of the flood plain of the Río Grande de Térraba, or, as we prefer to call it in the present paper, the Diquis River. *Diquis* is the older appellation, and is the name most frequently used in Costa Rican geographies, being an Hispanic form of the *Boruca* words *dik*, meaning "water" and *krit* or *krjta*, meaning "large." It is from this also that the term *Rio Grande* or "Large River" has evolved. The name *Térraba* is more recent, and is due to the onetime important community of *Térraba* Indians who were moved to the upper reaches of the Diquis River from the Talamanca region around 1700 by Fray Pablo de Rebullida.[1]

The land of the *Boruca* follows the river northward on both sides to a short distance above Curré. This territory includes the section of the Changuena River on the east, and most of the Cordillera Bruqueña, which is the Maritime Range, on the west and east. Within this limited area, the *Boruca* have five settlements. The largest of these is Boruca with forty-seven houses, and three hundred and thirty-four inhabitants, the majority of whom can be classed as Indian without *ladino* or white mixture. The next largest community is Palmar Norte, on the western bank of the Diquis River, at the start of the flood plain. This has a population of one hundred and seventeen Indians, but, unfortunately, many *ladinos* are seeping in due to its proximity to the farms of the United Fruit Company and the Costa Rican town of Puerto Cortés (formerly "El Pozo"). There is one other large village of Indians, Curré, on the western bank of the Río Grande. This is the northernmost settlement of the *Boruca*, and has one hundred and three inhabitants, and fourteen houses. The other sites might well be called by the Spanish term *aldeas* or hamlets. Lagarto, also on the western bank of the river, has fifteen Indians and three houses. The rest of the tribe is scattered in locations which should be classed as *ladino* towns, such as Maíz, which was once all Indian, but now has only twenty-six Indians, Puerto Cortés which has fourteen, and Buenos Aires which has seven, some of whom are not pure. According to the census taken by the school teachers in Boruca, there are about twenty-five Indians who live isolated in the forest, many on the banks of the Changuena River, making a total of six hundred and forty-one *Boruca* Indians in 1945.

## EARLY HISTORY

What was included in the original territory of the *Boruca*, we cannot say. The term, which we find spelled *Burucac*, appears to have been first used by Juan Vázquez de Coronado in a letter to the king, written in 1563.[2] He unfortunately does not delimit their location. It is obvious, however, that they formed a single unit or tribe. Throughout the early literature, allusion is made to the *Borucas* as *indios infieles y de guerra*,[3] who apparently fought with many of their neighbors as well as the Spaniards. Later during the Conquest, the term was applied to a province on the Pacific coast which apparently extended from the territory of the *Quepos* Indians to the River Chiriquí Viejo in Panamá.[4] Around the year 1608, or a little earlier, Fray Alonso de la Calle went alone to the *palenques* or fortified houses of the *Boruca*, and succeeded in converting and pacifying them. Fray Alonso appears to have gathered some of these Indians and formed a town.[5] Certain it is that by 1649, there was a town known as Boruca,[6] and by 1666, the term *Boruca* had ceased to be associated only with the people of that name, but included also various tribes from the south and the adjoining coast who formed part of the reduction of *Nuestra Señora de la Concepción de Boruca.*[7] The town of Boruca, which is not the same town we know today, was founded to the north of the present site, near the savanna known as "Mano de Tigre" today. Here, various tribes, including the *Coto* were moved into the vicinity by the Spanish priests,[8] until in 1749, even the *Quepos* Indians were brought into the area and formed part of the community.[9]

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[1] Fernández, 1907, tom. IX, p. 502; tom. III, p. 327, footnote 8. Peralta, 1938, p. 425 gives the date 1697 for the transferal of these people.

[2] Vázquez de Coronado, 1908, p. 37.

[3] See Fernández, 1907, vol. VIII, pp. 99, 462.

[4] See Peralta, 1900, pp. 82, 218; Fernández, 1886, vol. V, p. 428.

[5] Fernández, 1907, vol. VIII, p. 99.

[6] Fernández, 1907, vol. IX, p. 364.

## PRESENT GROUPS

As we know them, the *Boruca* are a composite group, apparently inhabiting only a small section of their former domain. The peoples who are now represented by the *Boruca* were at one time neighbors and, to some extent at least, enemies. The *Boruca* today include the *Coto*, *Turrucaca*, *Burucac*, *Quepos*, and the *Abubaes.*[10]

## LANGUAGE

There are, unfortunately, no vocabularies of the original Boruca tongue. The present language is a mixture of the speech of the various peoples who form the modern *Boruca* Indians. The majority of linguists associate Boruca, even in the heterogeneous state in which it appears today, with the Chibchan dialects.[11] Lehmann divides the Chibcha into an eastern and a western branch, beginning the latter with the Cueva-Cuna with whose speech he also sees a resemblance to the *Boruca.*[12]

In connection with the name, *Boruca*, the Indians today do not use this term, but call themselves *Brunka. Brunka* is composed of two words, *brun*, meaning "ashes," and *ka* or *k·a*, meaning "within." Their town, however, they call *Boruca. Brunka* is singularly absent in the older documents of the Conquest and colonization, apparently coming into use around the nineteenth century.

## NEIGHBORS

The present neighbors of the *Boruca* are largely *Talamancan* tribes, the *Térraba* in the immediate north, and the *Ujarrás* (*Cabécar*) and the *Salitre* (*Bribri*) still farther northward. A few *Changuena* are rumored to exist along the upper reaches of the Changuena River where they probably settled in the seventeenth century.[13] Some *Boruca* say that these *Changuenas* are "enchanted," and cannot be seen; others that they have seen them. All of the *Talamancan* peoples were brought into this area from the Atlantic area in the early part of the eighteenth century by Fray Pablo de Rebullida, as stated above. Here they have remained, isolated from their original territory, each group distrustful of the other. The *Boruca* distrust in particular their neighbors the *Térraba.* They get along best of all, but not very well, with the *Ujarrás.* Even within the Boruca community this isolation is evident. The women seldom visit each others' houses. As much as a year may pass without one going to the house of a neighbor, but, when they do, they are very garrulous, and enjoy gossiping and laughing, seated on their little four-footed benches.

## ACCULTURATION

Since the appointment of a Spanish Magistrate, a *corregidor*, for Boruca toward the second half of the eighteenth century,[14] the *Bruncas*, *Brunkas*, or *Borucas* began to lose their own culture and personality. The slow acculturation of these people by the Costa

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[7] Fernández, 1907, vol. VIII, pp. 421–25. For the date, 1666, see p. 425.

[8] Fernández, 1907, vol. VIII, p. 424.

[9] Lehmann, 1920, vol. I, p. 20

[10] Lehmann, 1920, vol. I, pp. 151, 195, lists all of these people with the exception of the *Abubaes*, as forming the modern *Boruca*. The *Abubaes*, however, also should be considered as part of this group. See Fernández, 1907, vol. VIII, pp. 421, 424.

[11] See Mason, 1940, pp. 86–87, and the linguistic map of Johnson, 1940.

[12] Lehmann, 1920, vol. II, p. 71.

[13] See Fernández, 1907, vol. VIII, p. 424.

[14] Fernández, 1907, vol. IX, p. 363.

Ricans has unfortunately gained in degree since the advent of the vanguard of road-builders for the Pan-American Highway. To date, they have, however, managed to keep relatively free from inter-mixture either by marriage or by cohabitation with non-Indian peoples (see p. 26), and are, curiously enough, practically the only group in modern Costa Rica who have retained their indigenous dress, even though many of their customs have unfortunately disappeared.

## *VILLAGES*

The village of Boruca is situated in a low depression on undulating hills, about 6 miles inland from the River Diquis (see fig. 3, *a* and *b*) and at an altitude of approximately 466 meters. As a rule, the day-time temperature is between 75 or 78 degrees F. The nights are fairly cool, and during the dry season, fog or a very heavy mist is common in the early morning often lasting as late as eight or nine o'clock. These hillocks have been cleared of forest, and are quite bare save for a few scattered shade or fruit trees. There are no streets, but several narrow foot and animal paths extend through the town. The Indians are accustomed to pick their way over the grass to the houses which are scattered over and in between the hillocks, forming a picturesque panorama which can be best seen from the summit of the two tall hills which flank the village on the northern and south-eastern sides, respectively. Eastward, a trail leads down to a mountain spur which extends in a northeastern direction toward Curré, some 6 miles distant. Formerly, Boruca had a *cabildo*, or town hall. Today, this has disappeared, and the wooden schoolhouse and church with its haphazard wire fence are the only semblances of *ladino* architecture. Although most of the houses have no fences, a very few have wooden ones, hemming in a garden with colored crotons, flowers, or some fruit trees. The school is starting a *manzana* of vegetables and fruit trees on the outskirts of the town. A small creek, with tree- or bush-lined sides, known by the Spanish name of *La Quebrada* or the Boruca name of *Tupſi*, flows through the community, supplying water for washing purposes. The drinking water is derived from springs which are located in the northern section of the town.

Curré and Lagarto are river hamlets, lying in the very narrow plain cut by the Diquis River in its upper course. They are low, unhealthy locations, the houses situated in dense forest and thickets. As a consequence, they are not open and fresh as Boruca, but closed-in, and, for many months of the year, mosquito ridden. These villages have even less the aspect of a formal town than Boruca. Narrow, almost imperceptible foot paths lead from one of the widely scattered and nearly hidden houses to the other. There are no churches or schools, and perhaps there is one fence in both communities. Water is obtained from shallow wells on the river bank, from small creeks, or from the river itself.

Palmar Norte is on a flat right on the river bank. The forest comes to the outskirts of the town, but unlike the other river villages, the community itself is open and free of the bush. Palmar Norte is obviously under *ladino* influence. Here, there is a definite attempt to lay out a "town" in the Spanish-American sense, with a *plaza* or square, a church, school, several saloons and stores, the houses all with fences, and broad, wide, grass-covered streets connecting blocks or squares. It keeps its indigenous characteristics in the still ample space or gardens around the houses, and, of course, their construction which, for the most part, is like that of Lagarto and Curré. Malaria is prevalent among the *Boruca*, who are, otherwise, an exceptionally healthy people.

## *SUBSISTENCE ACTIVITIES*

**Farming.** The farms of the *Boruca* contain from three to five *manzanas*, a *manzana* usually comprising about ten thousand square *varas*.[15] The farms are away from the village, and are generally fenced in. The fence is nearly always made with living posts, usually from the *poro-poro* tree[16] (*Cochlospermum hibiscoides*). A vine called the *bejuco de fuego*, or *brutʃ·ɐ'* in Boruca, is used as horizontal bars, and to tie the fences, when the purse does not permit wire. The vine lasts at least a year without having to be replaced. One of the *manzanas* is always made into a *milpa*, or corn patch. The rest is planted with rice (*Oryza sativa* L.), sugar cane (*Saccharum officinarum* L.), plantains (*Musa paradisiaca* L.), yuca (*Manihot utilissima* Pohl.). The writer could not find the sweet variety which is *Esculenta* Crantz, although Pittier lists this in his vocabulary as *únhah*,[17] ñampí (*Dioscorea trifida* L.), cacao (*Theobroma Cacao* L.), some bananas (*Musa sapientum* L.), and tobacco (*Nicotiana Tabacum* L.).

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[15] A *vara* equals 33 inches.

Besides these ordinary foodstuffs, there is generally one or more of the following items: coffee (*Coffea* spp.), oranges (*Citrus sinensis* [L.] Osbeck), mangoes (*Mangifera indica* L.), pejibaye (*Guilielma utilis* Oerst.), both with and without thorns, papayas (*Carica Papaya* L.), alligator pears (*Persea americana* Mill.), pineapples (*Ananas comosus* [L.] Merr.), yucca (*Yucca elephantipes* Regel), *tiquisque* (*Xanthosoma violaceum* Schott), tree cotton (generally, *Gossypium peruvianum* Cav.), colored cotton (see p. 16), and at times, cashews (*Anacardium occidentale* L.).

The rice planted is the upland variety, and is sown after the ground has been subjected to the usual slash and burn method common to all *Boruca* cultivation. There are some twelve different varieties of corn, including a specimen with apparent jet black[18] kernels and a deep purple cob.[19] This is used as a rule, only for making chicha. Deep yellow, white, white and yellow, white-yellow-red, red, red-orange, and purple corn are also grown. The purple, like the black, is used generally for chicha. All the corn grown by the *Boruca* can be classified as *Zea Mays* L. and is divisible into types. The most common kind is known as "Tropical flint-corn," and the other as "dent corn." The various colors are secondary characteristics, and cannot be classified as distinct specimens.[20] The bean preferred is a variety (*Phaseolus vulgaris* L.) found, in Costa Rica, only among the *Boruca*.[21] It is a pole bean, and is red with large white spots.

The Indians visit their farms daily, leaving the village early each morning and returning about four or five in the afternoon. They take with them a lunch usually consisting of one or two items including either a tamale called *tʃari-kɔ*, which is made of dried green plantains, or chicha made from corn. The primary clearing of the forest to make the field is done by both men and women. The felled trees are burned in the dry season, and from then on, only the women, often assisted by the children, do the work.

In the village, and often on the savannas, guavas (*guayabos*) (*Psidium Guajava* L.), *Inga* (guavas) (*Inga spectabilis* [Vahl] Willd.), Spanish plums, *jocotes* (*Spondias purpurea* L.), and nances (*Byrsonima crassifolia* [L.] DC.) are found. These trees, although apparently not cultivated today, may well have been so in ancient times.

**Gathering and Cultivating Methods.** The agricultural implements of the present-day *Boruca* are almost completely borrowed from the *ladino*. The common tools are broad machetes and *macanas*, which have possibly evolved from a digging stick, and are made with a wooden shaft or handle and a small iron flat-edged blade at one end. This is used for digging holes or even cutting roots in the field. Spades and an instrument called a *cuchillo*, which is a long knife or machete, are also common.

The women open holes for sowing, using a long pole with a point at one end. The seeds are carried in a gourd (see p. 19) in one hand, and sown with the other. Ordinarily the crop is gathered only by the women and children, but rice is gathered also by the men. For this purpose, an implement made of cow horn and metal with a fiber string is used. The horn portion serves as a handle, fitting into the palm of the hand while the metal part is sharpened as a knife, and protrudes between the index and the third finger. The string goes over the thumb to help steady the whole. This implement (see fig. 3, *c*) may have been borrowed from the Chiriquíans (i.e., the people from Chiriquí, Panamá, who formerly had homesteaded much of this area), and who use a similar tool, or it may be a local *Boruca* inspiration. The cutters are frequently decorated with lineal designs and initials (see fig. 3, *c*). The cutting of the rice is done with the right hand, the left being used to hold the plant. As with all other products, however, only the women and children bring the rice in from the fields, piling it in large baskets called *habas* in Spanish (see p. 15).

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[16] *Cochlospermum vitifolium* (Willd.) Spreng, according to Standley, 1937, p. 713; and *Cochlospermum hibiscoides*, according to Pittier, 1941, p. 68. Also see Pittier, 1908, p. 129.

[17] See Pittier, 1941, p. 45.

[18] There is no true black corn. Purple always appears mixed with black.

[19] In Guatemala, especially in the west, black corn is used to eat, that is, to make tortillas, or in any other form, as well as to make chicha. It is particularly prized, along with other colored ears, as ritual offerings to the saints or to ancient gods.

[20] The writer thanks don Jorge Leon of the Institute of Inter-American Affairs, Food Production Division, San José de Costa Rica, for the above information.

[21] The Boruca bean is also known in Guatemala, particularly in the west, where it is called *pinto*.

**Sugar, its Manufacture.** Sugar is extracted from sugar cane in a very primitive fashion (see fig. 3, *d*). A tree with a knot is picked, and the knot hollowed out. About a foot or so distant, a forked portion of tree is placed erect, and one end of a hewn thick plank, slightly indented in the center, is rested in the fork with the other end against the live tree. A long pole is inserted in the knot hole, and a banana leaf is placed between the plank and the fork. Cane is put between the pole and the plank. One person holds and pushes one end of the cane and another pulls and receives it, while a third pumps the pole up and down. The cane is twisted to extract more juice as it is pulled through the presser. The juice runs down the plank, the leaf serving as a canal to guide the liquid into a vessel placed on the ground. When the pressing is over, the juice is boiled until an unrefined sugar remains.

**Domestic Animals.** As a rule, a family possesses a few chickens, some pigs, and an ox. The only one of these creatures which are given any semblance of shelter are the chickens, which, at night, are put in small houses (see figs. 4, *a*, *b*, *c* – see p. 23). In some households, there are dogs, which are used for hunting, and occasionally cats and birds. The birds are generally kept as pets, although at times they are raised for food. Bees are also domesticated occasionally (see fig. 4, *d*).

**Wild Foods.** The *Boruca* are very fond of flowers from certain bushes and trees. Among these can be listed the white blossom of the wild *majagua* (*Hampea* sp., and other spp.), the red blossom of the *poró* tree (probably *Erythrina costaricensis* Micheli), the green inflorescence of the *disciplina*, a variety of palm called *ʃjt* in Boruca which is probably a dwarf *Chamaedorea*; the inflorescence of the pacaya palm (*Chamaedorea* sp.) and the inflorescence of a palm called *sem-kra*' (*Carludovica palmata* R. & P.) the leaves of which are used to make hats (see p. 18). In addition to these items, the heart of the corozo palm (*Corozo oleifera* [HKB] L. H. Bailey), the royal palm *palma real* (*Scheelea rostrata* [Oerst.] Burret), and the heart or inflorescences of various palmitos including the black *chonta* or stilt palm (*Socratea durissima* Wendl.), certain small mushrooms called *ɔskwa*, which grow on fallen trees, and appear between the rows of corn after the first rains, the fruit of the *ojoche* (*Brosimum terrabanum* Pittier), and various berries are frequently used for food.

**Food Animals — Hunting.** These Indians are very fond of meat, and wild game is always welcome. The birds most widely hunted are the crested guan (*Penelope purpurascens* Wagl.) the *paweel* or curassow (*Crax rubra* Linn.), the chestnut-headed tinamou (*Tinamus major* Gmel.), and pigeons (*Columba* sp.). Toucans (*Ramphastos swainsonii* Gould) are also favorite food birds.

Animal diet consists of game, including wild pigs (*Pecari angulatus Cope*) and another species (*Tayassu pecari* Fischer), the *guatusa* (*Dasyprocta* sp.), deer (both *Mazama sartorii* Saussure and *Odocoilus* Boddaert), *tepezcuintle*, a member of the badger family (*Coelogenys paca*), the red monkey (*Ateles geoffroyi* Kuhl), and the white-faced monkey (*Cebus capucinus* Linn.). The river is full of fish, the chief sorts being a form of perch (*Cichlasoma altifrons* Kner. & Steind.), a fresh-water mullet (*Agonostomus monticola* C. V.), croakers and snook (*Centropomus pectinatus* Poey), as well as large crayfish and a smaller specie which is caught only in the summertime, and river crabs (*Pseudotelphusa magna*). From the sea, various fish and shell fish are eaten when the Indians go to the Pacific coast for salt. A large and small clam which come from the coast are also favorite foods.

The *Boruca* prefer to hunt in groups of two or three and without dogs. Their favorite time for hunting is when the moon is new, and, strangely enough, on Tuesday and Thursday. Night hunting is almost never practised, as this is the time when the poisonous snakes roam, the most dreaded of which is the bushmaster (*Lachaesis muta*). Traps are used for birds, and are generally placed in the rice fields or in the corn fields. The traps are made by the men with cane (*Gynerium sagittatum* [Aubl.] Beauv.) and are box-shaped, but without a bottom. They are placed in the fields with food inside and sustained at one end by a small stick which is broken in two, but is balanced one end on top of the other. A string is fastened to one portion of the broken stick, and is left on the ground next to the food. The bird enters the trap, and walking, moves the string, which in turn pulls aside the piece of stick, and the box drops, imprisoning the bird. Sling shots are used by the boys to shoot birds. The bow and arrow for hunting have entirely disappeared, their place being taken by the shot gun and rifle.

**Fishing.** The *Boruca* have five ways of catching fish. One manner is with a vine (*Serjania cornigera* Turcz.). They also mash the bark of the *espavel* (*Anarcardium excelsum* [Bert. & Balb.] Skeels) and sometimes the bark of the sandbox tree, *javillo* (*Hura polyandra* Baill.). This last is less effective. To fish with vines or barks, a portion of the river is hemmed in by the men who construct a wall of stone at the upper and the lower end. They then mash the material chosen and throw it in the dammed section. The fish come to the surface stupefied, and are gathered by the men. The *Boruca* prefer to fish, however, with spears. These are of two sorts: long white canes between 57 and 58 inches long with an extended tip of pejibaye palm about 18 inches in length with several barbs at the end, and a shorter cane about 40 inches long, also with a pejibaye end, but without barbs and with a steel needle-like protrusion fastened to the pejibaye section. The short spear is used in the local creek for small fish, while the longer one is used in the river for larger fish. The pejibaye part is fitted into the cane and tied with string. The string used for fishing is always made of *pita* (*Aechmea magdalenae* André) (see p. 15). Occasionally a bow is used to shoot the fish. The only difference between the arrow and the spear, is that the arrow has a trifle shorter shaft.

Crayfish and river crabs are caught by hand, chiefly by the young boys who remove the stones in the stream and catch the shell fish from under them. It is nothing unusual that a hundred or more are caught at one time, the result being enjoyed by practically the whole tribe.

**Food Preparation.** The food of the *Boruca* is cooked in earthenware vessels, and, if the means of the family permit, in iron pots. These are placed on top of the three hearth stones, which are on the earthen floor, or on the *fogón*, or stove (see p. 12). For grinding grain, metates or grinding stones, called *tumbas* in Costa Rica, are used. These are natural boulders worn smooth on top. The grinding is done with a smaller flat stone with wide rounded edges. This stone is held up-right on the edges and is rolled from side to side, and not pushed backward and forward as in the greater part of Central America (see fig. 5, *a*). The small metates found in ancient graves are never used for corn, but frequently for grinding cacao, often with a pestle-like stone as the grinder.

When food is not taken by hand from the vessel in which it is cooked, it is served on cheap tin plates, or, in poorer households, in gourds (see p. 19), and eaten either with the fingers, a spoon, or a fork.

One of the most important elements of food of the *Boruca* is salt (see p. 24). The *Boruca* make a trip to the coast yearly to extract the famous *sal de piedra*, or rock salt, which lasts indefinitely, and has a fishy strong flavor. This rock salt is made by gathering the driftwood on the beach and burning it. A *haba* (a large-holed basket made of a vine or tree fiber, see p. 15) is lined with leaves and hung over a clay vessel. The ashes are put into the *haba* and sea water poured over them. The residue from this filtering process falls into the clay pot. This residue is cooked until it is dry and then recooked, about three times in all. The result is a rock-like mass with dark strata-like lines due to the ashes and sea sand. This rock salt is so hard that to procure salt for use it is necessary to scrape it with a sharp knife. A very little is sufficient as it is much stronger than ordinary salt. Rock salt, besides its general use in cooking, is much sought after by sorceresses.

Occasionally, instead of making all their salt into rock salt, the *Boruca* extract the residue after the first cooking and put it in a gourd. This they put in the hot sun until the contents are thoroughly dried. The result is a softer, not so strong-flavored, and more easily used salt which is called in the Boruca tongue *kj’-kɔg*. This literally translated means “salt liver,” as it is softer than the rock salt, and liver is one of the softest elements of the body.

Although the *Boruca* do not make many tortillas, they distinguish between those made of old corn and those made of sprouted corn (*maíz nacido*). They also make tortillas from green plantains, and from the fruit of the wild *ojoche tree* (see p. 7). Atol is made from rice and corn, and given to the babies when they are weaned. When rice is not dried on hides, it is hung from the ceiling over the stove and smoked dry. Then it is put into a wooden mortar and husked, to be boiled when needed.

Plaintains are roasted with and without the skin. They are also fried. Green plantains are peeled and placed on hides in the sun to dry. They are then kept in a knotted string bag (see p. 18) in the kitchen. When the plantain has hung for sufficient time to be very, very dry, it is ground to a fine powder and used as a flour for making tortillas or tamales. A wooden knife is always employed to cut the dried plantains, because if a steel knife is used, a black stain results and the flour, consequently, is colored.

Hen eggs are generally eaten, but occasionally a man will bring crocodile eggs from the river. These are cooked with *guayabo* (guava) leaves (see p. 6) to take away the strong taste. Foodstuffs (see p. 7) such as mushrooms, hearts of palm, and flowers, including the blossoms of the papaya and the *poró* tree, are usually boiled, cut up, and mixed with hen eggs. Sometimes meat is substituted for the eggs. The cob-like inflorescence of various palms are boiled and fried. Another generally liked food is the tender leaf of the bean vine. This is prepared either with eggs or in soup.

Meat, fowl, and fish are frequently wrapped in the leaves of the *bijagua* (*Calathea insignis* Petersen). Another *Calathea* known as “black *bijagua*” is used interchangeably with the first kind. The food wrapped in the leaves is roasted on the hearth stones. There are various ways, however, of preparing different meats. Armadillo is often boiled or fried. Domestic and wild pig and venison are placed on top of three or four sticks over the hearth stones and roasted. Sometimes the flesh of these animals is sun-dried and salted, or is smoked for preservation. Beef is almost never eaten, as the cattle the *Boruca* possess are not numerous and are in the hands of a very few; besides, since they are used for traction, they are economically too important to eat (see p. 23). Posole is a common dish and is made of dried meat, usually wild pig. The meat is chopped fine and cooked with corn. The combination is then ground. If this is boiled every night, it keeps for many days.

Shell fish is boiled, but fish, other than shell fish, is seldom eaten fresh. When it is, however, it is put into a soup, or roasted in leaves, or fried. As a rule the fish is cut into three pieces and salted to be eaten when needed. If salt is not available, the fish is smoked and saved. Smoked fish is said to be excellent for diarrhea.

**Fire-making.** The majority of the *Boruca* use matches, although a few of the older people occasionally use two sticks to start a fire. This is accomplished by taking a stick of pejibaye and rubbing it around and around in a small hole in a stick of *guácimo* (*Guazuma ulmifolia* Lam.), until sparks set the *guácimo* on fire. Some of the elders still talk of the stones which were formerly rubbed together to start fire, using a piece of cotton as a wick. These are not seen today.

In the bush, or in the fields, fire, which is all important among the *Boruca* for clearing purposes, is kept in an old tree trunk from day to day. This is done by throwing ashes over and around the fire to keep the embers hot and alive, much as is done in New England fireplaces at present.

**Food Storage.** Corn is kept in large *habas* (see p. 15), in small raised-off-the-ground houses behind the main house, or on the wooden platforms, or *tabancos*, in the main house. The corn is shucked and left on the cob. Rice, unhusked, and various foodstuffs are also kept in these houses or on the more common *tabanco*. Eggs are hung in baskets of armadillo hide in the storage houses, or on the walls of the kitchen. Smoked fish and meat are also kept on *tabancos* in the kitchen, or hanging from the walls.

**Drinks.** *Tivia* (see p. 20), the liquid remaining from cocoa-butter, is drunk plain, or, at times, ground corn, and, very seldom, ginger is added. *Tivia*, which is also called *kao*, is ground cacao that has been mixed with water, cooked, and beaten with water. It is taken plain without sugar, or it is mixed with roasted ripe plantains.

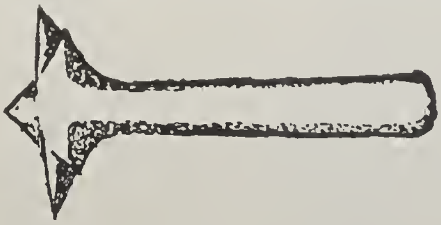

Fig. 2. Wooden masher for chicha; size, length, 22 inches.

Chicha is made from old corn alone, or mixed with pejibaye, or with ripe or green plantains, or with ñampí, or with yuca, or with diverse starches.

Two kinds of corn chicha are made. One kind is made with a yeast, and consequently is known as *monsera*, which is the word for yeast. This chicha is used regularly at all celebrations, and in some houses almost daily. The other corn chicha is given by wives to unfaithful husbands to keep them from looking at other women. This last kind is called *punsetti* in Spanish, or *twistʃa’* in Boruca. To make the ordinary chicha, whole kernels of corn are broken or crushed on the *tumba*, then left in water overnight. They are ground again, and the *masa*, or ground corn, is wrapped in a leaf or leaves, usually from the plantain, and boiled as a tamale. When cooked, it is left in the same leaf and hung as a rule on the wall outside of the house, but sometimes inside the house, for three days (see fig. 5, *b*). It is then taken out and rewrapped in the same leaf but this time using the outer side of the leaf on the inside, and left for three more days hanging on the outside wall. If a yellow mold appears, it is still used, but not considered as good as without the mold. At the end of the three days, it is unwrapped again and left in the sun until it is thoroughly dried, when it is considered suitable to use as yeast in the chicha. When green plantains are used, the *Boruca* prefer to dry them on stones by the river instead of in the customary manner on hides by the houses. When dry, the plantains are ground and added to the corn to ferment. This also is considered *moboso*, *monsera*, or yeast. When pejibaye, ñampí, yuca, or ripe plantains are used, they are cooked and then ground before being added to the corn.

The next step is to crack more corn, grind it, and let it soak overnight. It is then cooked until it starts to boil, when it is removed from the fire and mashed with a wooden masher (see fig. 2). Sufficient water is mixed with the corn to keep it from being either too hard or too soft. The grain is then mixed with the yeast. This concoction is left anywhere from six to fifteen days in *habas* lined with leaves. These *habas* are generally kept on the *tabancos*. At the end of the allotted time, the *haba* is taken to the river, and its contents emptied into gourds. Water is added to the paste which is pounded until it becomes soft. The chicha is usually kept in large earthenware jars, called *dʒɛ-bwï’-griŋ’*, in a corner of the house, and covered with leaves or a cloth to keep for further use.

The corn for *twistʃa’* is made from corn that is left to sprout in water. When it has sprouted, it is ground on the *tumbas*, or grinding stones, and then cooked in a pot, after which it is left in wooden trays, called by the Spanish name *bateas*, to cool. When cooled, the corn is chewed by the women and the residue is spit into a clay vessel. Here it is mixed with water and brown sugar is added. It is then strained, put into a vessel, and left to ferment. The fermentation often takes place over night.

**Narcotics.** Tobacco is used extensively by both the men and the women. It is chewed mostly by the men, but also by the women. All people, including the children, smoke cigarettes, and both sexes use wooden pipes.

When hungry and no food is available, or when working and extra strength is needed, the Indians chew a root from a plant called *cordoncillo* in Spanish. It is a member of the *Piper* family, and has various uses among these Indians (see pp. 20, 21, 27).

## *HOUSES*

Houses are built straight from the ground, without any attempt at a foundation, the floor being of earth. Occasionally, a shallow ditch is dug around the whole as a drain, and sometimes a low base of earth is built up and kept in place by wooden poles laid horizontally and supported by short vertical poles (see fig. 5, *c*), or by several wooden planks. Houses like this have earthen steps as an entrance. The majority of the structures, however, have a single pole at the very base serving as a finish between the house and the ground, and, in a measure, as a protection against water seepage from the outside (see fig. 5, *b*). None have porches.

In the lower, warmer areas, such as Curré and Lagarto, the houses frequently have a row of stones around their base, and even a protruding terrace of stones at the front (see fig. 5, *d*). This offers better protection in wet weather, as these sites are low and subject to backwashes from the river when rains and floods are heavy.

The shape of Boruca houses is square or rectangular. They are made of wooden poles with grass roofs. The wood used is *palo de mayo* (May tree) or the María tree, *palo María* (*Calophyllum brasiliense* Camb. var. *Rekoi* Standl.). There are two kinds of *palo de mayo*. One kind has white wood and is identified scientifically as *Vochysia hondurensis* Sprague, while the other, which is preferred and has a pinkish tinge is probably *Vochysia ferruginea* Mart.? The *palo María* also has a pinkish wood, and is used only when the tree is very small. On the coast, the wood of the *huiscoyol* palm (*Bactris minor* Jacq.) is used for roof rafters when available. It is not used in Boruca, as this palm does not grow there.

**House Construction.** The poles which are the thickest are placed vertically at the corners, by the doors, and at intervals along the walls to serve as supports. The intervening space is filled in by not so thick poles placed very close together, either vertically as in figures 5, *c*, *d* and 4, *c*, or horizontally as in figure 9, *c*. When they are placed horizontally, they are woven in and out of the supporting vertical poles which, of necessity, are more numerous in this type of construction. When the wall poles are vertical, thicker poles are placed horizontally in a single line on the outside at the bottom, the center, and the top, acting as a supporting band to hold the wall in shape. These bands are bound to the other poles with fiber ropes.

There are three kinds of fiber used in house construction. The most popular, and practically the only kind found in Boruca houses, is that known as the *bejuco de fierro* or *negro*. This is a thick vine growing in the forest (perhaps *Anthurium scandens* [Aubl.] Engler).[21a] Its leaves resemble those of the bean known as *haba blanca*. From this vine, as many as eight cords are obtained, depending, of course, on the width desired. Another fiber used is called *bejuco de hombre* and is known also as *andariel*. This is really an aerial root and is found in house construction on the coast, around Palmar Norte, where the *bejuco negro* is not obtainable. The third type of fiber is made from the bark of a tree called *capulín blanco* (*Muntingia Calabura* L.). Sometimes both horizontal and vertical wall construction are found on the same house (see fig. 6, *a*). Windows are rare, but when present, the framework is always made of the thicker poles. The window shutter, however, is of planks and the hinges bought at *ladino* stores. Doors also have a framework of poles. The doors themselves are made of the small vertical poles following the vertical construction of the walls and are tied with vines, no hinges being used. Frequently, the walls have a rough coating of *bajareque* both inside and out. *Bajareque* is a mixture of cow dung and mud. Strangely enough, the

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[21a] *Cydista pubescens* Blake, according to Dr. R. J. Seibert, Turrialba, Costa Rica.

*bajareque* is never put on the walls neatly, but is always splotchy, giving the impression of a quick hasty job. The houses of the *Boruca* who live in the lowlands, e.g., in Curré and Lagarto, by the banks of the Diquis or Térraba River as a rule do not have *bajareque* because of the heat. When it is employed, it is only to cover the side where the prevailing winds touch.

The outstanding feature of Boruca houses is the roof which, except for a few houses generally in the lowlands, is made of grass. The few exceptions have roofs of corozo palm leaves or of the *sem* palm. The roofs are made with great care, and last from forty to fifty years.

A pole is tied horizontally to the top of all the vertical supporting poles (see fig. 6, *b*). The wood used is generally *palo de mayo*, or May tree. Other poles are tied vertically to these horizontal poles. These non-supporting vertical poles are then inclined until they converge and cross at the top, where they are fastened to two horizontal thick poles, one under, and one on top of the converged poles (see fig. 6, *b*). Anywhere from two to four pole braces, depending on the size of the house, are inclined from a bottom corner toward an opposite upper corner, usually reaching the center of the roof and not the corner. At intervals, thick poles are tied as horizontal braces to the vertical and converged supports (see fig. 6, *c*).

In between these braces, smaller poles are placed horizontally following the lines of the braces (see fig. 6, *c*, *d*).

Despite the fact that the savanna is full of various grasses, the Indians take great pains to procure only three special kinds which grow in these savannas, and which are considered essential for a Boruca roof. The first of these grasses is called in the Boruca tongue, *bjak*, and in Spanish, *zacate de sabana*. It resembles *calinguero*, which in other parts of Costa Rica is planted for cattle feed. However, *bjak* does not have an odor. This grass has a little fuzz all over it which makes it in a measure impenetrable to water, and is supposed to keep all drops from entering. The second kind is called in Boruca, *ʃupʃus*, and in Spanish, *zacate de comején*, or "termite grass," as the termite likes to make nests at its roots. This grass is used to level off the roof and to make an even finish. The third grass is thin and fine, and is called *zacate de palito*, in Spanish ("little stick grass") or *su* in Boruca. This is supposed to protect against and to stop cracks.

The Indians pull up these grasses, roots and all, and gather them in bundles which they tie with a vine or pieces of the grass itself. They put these rolls on an ox or on their own backs and take them to the building site (see fig. 7, *a*). As many as twenty-seven hundred rolls or bundles of grass are needed for an average roof. If the grass gets wet, each roll is opened and laid in the sun to dry. When ready to use, the grass is placed between one or two of the narrower horizontal poles of the roof forming a neat row. It is not tied, but is literally wedged-in. A roof usually has from six to nine horizontal rows of grass.

The interior of the houses varies. Some have two partitions made of *caña blanca* (see p. 8) or even of thin *palo de mayo* poles, following the same construction as the outer walls, at times, even with a smattering of *bajareque*. When a house is so divided, one room is used for the kitchen, one for a sleeping room, and one for a living room. Occasionally, a little hallway results in this type of house. However, the hallway is only the result of the partitions and is not an architectural feature. The average house, however, has only one partition, usually of canes, which sets off the kitchen.

**Household Furniture.** Many of the *Boruca* have, in addition to the three hearth stones (see p. 8), a *fogón*, or stove, built in the typical *ladino* fashion. This *fogón* is a raised wooden container, rectangular in shape, and supported by four wooden legs.

The container is filled with mud mixed with pebbles or small pieces of stone and left to dry. When thoroughly dry, three or more stones are placed on top to support the cooking vessels. Sticks of wood are placed between these stones and set on fire for cooking. At times small rounded mud ovens are also made on the *fogón*.

The *tabanco*, or wooden platform, is an important feature of a Boruca house. The *tabancos* are usually made of the stilt or black palms called in Spanish *chonta*, or *chonta negra*. There are two kinds of *chonta*. Both have aerial roots, but the one with large roots is called in Boruca *kanazira*, and the kind with smaller roots is called *mana-kra'*. These *tabancos* either hang by vines from the roof, and serve as storage places for food or other things, or they are more stable structures made with thick horizontally placed poles resting on the uppermost horizontal pole of the wall, and forming a sort of second floor or platform to be used for sleeping as well as storing. To climb to this sort of *tabanco*, ladders made by notching a single pole so as to give place for footing are used.

Beds usually line the inside of the living room. These beds are made of four supporting sticks with a v-shaped upper end. The lower end is placed in the earth. The bed supports are either of wood or of *chonta*. Usually a rectangular framework of four poles is fitted on top of the vertical supports and tied to them with a vine. The bed itself may be made of cane or hide, although sometimes planks are used.

The only furnishings besides these beds are low wooden benches about an inch off the ground, and in certain houses, plain old-fashioned wooden coffers to keep clothes. These coffers are purely *ladino* and have been copied from the Costa Ricans who at one time or another have settled among these Indians. The low wooden benches are pure Indian, have four feet, and are either plain or have protruding heads and often tails (fig. 7, *b*–6, *c*–*1*). It has been suggested that this last type is copied from the stone seats or metates of the ancients.[22] The benches are kept highly polished with *chumica* (*Curatella americana* L.) leaves, and are used throughout the household, in the kitchen, by the hearth fire while cooking, as a convenient seat while weaving, and as we use chairs in our houses.

There is at least one hammock in every household, although frequently two, or even three, are found hanging from the top of the walls. They are used to sleep in as well as to sit in during the day.

*Habas*, empty, and with foodstuffs or clothing, are piled in corners or on *tabancos*. Wooden mortars, carved from a single piece of wood, and the wooden masher, are part of every household. These are for husking rice (see p. 9). Large pottery jars to keep chicha are generally found in the corner of the living room. String bags of diverse types hang on the walls with weaving implements, cotton, or thread; while also on the walls, and especially in the kitchen, hang pots dug from ancient graves (when the family is not superstitious), and always bottles of sundry types. These contain many different things, from herbs to oil and seeds. *Maracas*, occasionally masks for festivals, drums, clusters of parrot feathers, toucan beaks, ears of vari-colored corn, bright red shells from boiled crayfish, and even cock feathers are stuck at random in the walls or hang on strings from them, giving a gay appearance to the household. In certain houses, pet birds such as parakeets, parrots, and macaws are kept by clipping a wing. Instead of cages, a rack is made of pieces of wood, and kept in a corner of the household.

## *DRESS AND ORNAMENTS*

**Clothing.** Relatively few *Boruca* wear costumes. The only ones who do are the older women who wear a *manta*, or skirt (see fig. 7, *d*), and a few men who still use the woven belt (see fig. 7, *b*–7). The majority are clothed in cheap unattractive cotton dresses, the cloth bought in the nearest *ladino* settlement. Besides the *manta*, the women wear a *huipil*, or blouse, which may be of any color, even white. (The word *huipil* is understood and used at times by these people. They have forgotten their own word for it although they admit having formerly had one.) This blouse is sometimes opened down the front, and sometimes closed. It has sleeves, and is fashioned with a guimpe effect at the neck, hanging loosely over the skirt (see fig. 7, *d*). Formerly, the women used a woven *huipil* which always had a white background, no sleeves, and a rectangular neck. The design consisted of stripes, either wide or narrow. The cloth was finer than that of the skirt, being the same quality as a man's belt. Occasionally, as late as a few years ago, this same *huipil* was used with a piece of cloth attached to the back as a collar. The skirt, which is relatively heavy, is worn wrapped around the body, the stripes placed horizontally (see fig. 7, *d*). It is sustained by a string tied around the waist. Under the skirt, loin cloths of *mastate* (see p. 18) are sometimes worn. No other sort of undergarment is used.

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[22] Stone, 1943, p. 81.

Today, most women wear two necklaces, usually of beads with seeds or coins interspersed. Earrings of seeds, a round red seed from the *poró* tree, or a similar seed that has a black spot and grows on a vine, are favorites, but cheap earrings from *ladino* stores are also seen. Before, however, in addition to seeds and fruits, sea shells and even pearls were used. Pink sea shells, such as the *Guaymi* wear today, were particularly coveted. Animal pelts and bird's egg shells served as necklaces. Rings were and are made from the seeds of the coyol palm and a palm called *palmilera*. The women love combs and flowers in their hair, seldom appearing with less than two combs and, as a rule, three or four, all of bright colors and bought from the Chinamen on the coast or in Buenos Aires. Barrettes also are frequently placed between the combs and the flowers. The hair is always arranged in two braids and parted in the center. Often ribbon is braided in these plaits. Until recently, instead of ribbons in the braids, cotton thread dyed purple was used. It is said that no other color answered the purpose. The two braids were tied with this thread on top of the hair in the front. Today, the older women generally put the braids up, tying them together with ribbons. The hair is kept sleek with cocoa-butter, and the skin is cleared of freckles or blemishes by using a mixture of cocoa-butter (see p. 20) and *tʃama*. *Tʃama* is sometimes called by the Spanish name *yuquilla* (*Curcuma longa* L.).

The men wear the regulation pants and shirt of the *ladino* and some still use the woven belt. In the beginning of this century, the men wore a typical costume, the cloth for which was woven by the men. Lehmann[23] notes that this was characteristic of the *Cotos*, whom, as we have seen, form part of the modern *Boruca*. Weaving was done by some, not all, of the men and women. In particular the older *Coto* men wove for all the other men.[24] The men used a *huipil* without sleeves which took one month to weave and reached below the knees. The stripes were narrower than those of a women's skirt, and they were more like the belts used at present by the men. Beneath this, they wore a loin cloth of *mastate*, and a woven belt which kept the loin-cloth in place. Formerly, the men cut off all their hair except a small portion in the front which stood up like unruly bangs. One old man in 1944 used the same sort of decorations which were used years ago, pelts of birds, squirrel tails, and bird egg shells as necklaces.

Most Indians go barefooted, although occasionally sandals are seen. These sandals are of hide, usually of wild peccary, with thongs of twisted hide which pass between the first and second toe and between the third and fourth toe, being fastened on the outer side by the ankle.

## *TRANSPORTATION*

**By Land.** The *Boruca*, as is true of all the Indians of Costa Rica, are great walkers, climbing up and down the sharp spurs and steep mountains of their native habitat. Their main community, as we have seen, is situated in a series of undulating hills, which in itself is not easy country for a horse or a mule. The ox is what one might rightly call the only beast of burden common to these people. A number of families own an ox which is used to transport essentials on his back (see fig. 7, *a*), and never to pull a cart as amongst the *ladinos*. The very few horses of the *Boruca* (see p. 23) are ridden with a halter, and old, worn, second-hand saddles.

**By Water.** In addition to a mountainous land, the terrain of the *Boruca* and most of their communities border on water. The Diquis River still forms an important highway for these people. Until a few years ago, the sea, skirting the coast westward to Quepos and eastward to the Golfo Dulce, as well as out to Caños Island, furnished another avenue of travel. Dug-out canoes are used in the river, and a larger canoe, called a *bongo* in Spanish, was used on the sea. These *bongos* had sails of bark cloth (see p. 18) which were fastened to a framework of sticks. There are only three kinds of trees utilized for making the canoes, the *espavel*, the sandbox tree, and the *guanacaste* (*Enterolobium cyclocarpum* [Jacq.] Griseb.). The canoe is caulked with wax, from certain bees (*Apis Trigana*? or *Melipona*?), which live in the ground on Caños Island. It is said that this is one of the few places in which this species of bee is known to exist in southeastern Costa Rica. It is interesting that this wax contains a majority of resin and very little wax, as the analysis given in the appendix shows (see p. 41). Formerly, the Indians visited Caños Island especially to obtain the wax, coming away with as much as 30 or 50 pounds in their canoes. Nowadays, since the island is no longer easily accessible, caulking is done with the wax from a related species found around Boruca, or from the glue made from a palm belonging to the genus *Elaeis* and called in Boruca, *tuskra'* (see p. 19), and with the gum of the wild rubber tree (see pp. 19–20).

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[23] Lehmann, 1920, vol. I, p. 198.

[24] Vázquez de Coronado, 1908, p. 50.

There remain certain families of "river Indians" who are famous for their skill with the dug-outs, particularly in the rapids, and there were formerly outstanding sailors for the sea-going *bongos*. On the river, both paddles with plain handles and poles are used.

**Carrying Devices.** Generally, the women carry cargo (see figs. 7, *a*; 8, *a*). The men very seldom do such labor. A tumpline is used to support the article which rests on the back of the individual or in a *baba* (see below), which is also carried in a similar manner (see fig. 8, *a*). Occasionally, string bags (see fig. 8, *b–4*, *5*, 7, and p. 18) are swung from the forehead down the back. They are, however, rarely used like this, being generally left to hang on the house wall. Babies are carried in a shawl or cloth on the back.

## *MANUFACTURES*

**Cordage.** The *Boruca* have two principal fibers which serve for making cord, and two which are employed but slightly. The chief fibers are *majagua* (see p. 7), and the *bejuco negro*, or, *brit* (see p. 11). These are used for making rope, string, baskets, and hammocks. In addition to this, the leaves of the *pita* plant and, at times, the leaves of the *cabuya* plant (*Furcraea* spp. and *Agave* spp.) are utilized for bags and rope.

The *majagua* is prepared by cutting a piece of the tree and stripping off the extreme outer part, using only the inner portion. To make rope from this, the fiber is tied around a tree or post and cut into strips, the quantity depending on the quality of rope desired, as the greater the number of strips, the finer the product. Figure 8, *c* shows the *majagua* fiber ready for use. The *bejuco*, or vine, is prepared by scraping off the outer bark with a knife of *caña blanca*, washed, and then cut into the desired strips. It takes a day to make this vine ready for use. The *pita* is also scraped with a cane knife until it is white all over. It is then washed in the creek or river, and cut into the desired pieces. *Pita* is not used for heavy rope, but is made into cord and a "fishing line" which is tied to the fishing spear or arrow (see p. 8). The leaf of the *cabuya* is beaten on stones until it is pulpy, after which it is washed, and then dried in the sun. When dry, it is pulled into strips.

Figure 8, *d* is a sample of the two kinds of rope the *Boruca* make. The upper portion is twisted and braided, while the lower half is only braided. This last method makes a stronger rope. When the rope is finished, it is tied at the end, and one of the strips is twisted around the whole, passed through the braid, and then pulled tightly.

**Basketry.** The typical basket of the *Boruca* is what is called in Spanish the *baba*, and in Boruca *ba'va*. It is woven by the men. The *baba* (see figs. 7, *b–2*; 8, *a*, *b–1*, *3*) is made only from the *bejuco negro*, the strips of which must be cut in lengths according to the size desired for the finished product, as in this type of basket one cannot add extra length or depth. The smallest *baba* is about 9 inches in depth, and is used for washing corn. For a medium-sized *haba*, the strips are usually around 30 inches long, while the largest are around 50 inches. The base of the *haba* is triangular with the corners and two sides rounded. The third side is kept flat to fit more steadily on a person's back. In making the basket, the strips are placed on the ground and the foot put over as many ends as possible to hold the pieces in place. The opposite ends are left free, and the weaving is done with the fingers (see fig. 9, *a*). The pattern resulting from this is a hexagon (see fig. 7, *b–1*). When the base is completed the strips are doubled upward and interwoven, particularly at the corners, and horizontal strips are added as strengthening bands at the start and finish of every hexagon, the pattern remaining the same as that of the base. At the very top, a horizontal band is overlapped by the main strips and woven into the rim. A wide ribbon of the vine is fastened around the *haba* when used for carrying. This band is suspended from the forehead of a person, and the basket hangs flat on his back (see fig. 8, *a*).

Baskets are also made from the *bejuco negro*, or, preferably, from the vine called *anda-riel* (see p. 11). These baskets are circular with a decided bulge or projection a little above the base. They vary in size from short baskets with handles to very tall ones (see fig. 7, *c*). The strips used for the baskets are cut narrower than those for the *haba*, and may be added to in order to increase the depth of the article. As with the *haba*, the strips are put on the ground at the start. They are crossed, however, in the center, and another strip is then tied to this center portion or base, and is woven in and out of the projecting strips by hand. Adding of strips to make the basket larger is accomplished by weaving a strip well into the basket until an end appears on the other side of the base.

**Weaving.** The *Boruca* are today the only Indians of Costa Rica who do any weaving, in spite of the fact that they do very little. In 1945, there were only six women in the village of Boruca who wove skirts, *mantas*, and one woman who wove only men's belts. Almost all the women and many of the girls, however, knew how to make thread. A common practice was to make thread and give it to one of the weaving women to use, and then pay her a small sum for her work if a skirt was desired. Those who did not wear *mantas* still made the thread and sold it or exchanged it with the weavers for some other object. The primary cause for lack of enthusiasm in weaving appears to be the class of cotton available. The *Boruca* plant a tree cotton (see p. 6) that yields a very small pod, and consequently, the Indians become discouraged at the produce. The famous "colored cotton," which is so called as it is light brown, is also planted. This is the cotton which called the Spaniard's attention so markedly in El Salvador during the Conquest, and which is used today by the *Cayapa* Indians of Ecuador.[25] This colored cotton does not have to be dyed. It is, however, more delicate to make into thread than the white cotton, as it breaks oftener. The best spindles, as the best looms, and weaving instruments of the *Boruca* are made of pejibaye palm, although *chonta*, both *mana-kra'* and more seldom *kanazira* (see pp. 12–13), are considered good (see fig. 9, *b*). The whorl, is commonly of bone, but pejibaye, *chonta*, and occasionally pottery whorls are seen. Some of the whorls are undecorated, but some have incised horizontal grooves (fig. 9, *b–3, 4*).

To make thread, the cotton is removed from the burr and carefully deseeded by hand, the seeds being saved for planting. The cotton is then put on a hide, and the women take two sticks, one in each hand, and beat the cotton making it as smooth as possible, after which, it is pulled into wide strips and rolled into balls. When the cotton is ready, the woman sits on a low bench and puts the spindle in a gourd on the ground. She holds the spindle in her right hand and the thread in her left, between the thumb and index finger, working so fast that it seems as if the spindle is rarely in her hand at all. This process the Indians call "dancing," as the spindle literally dances in the gourd (see fig. 5, *c*).

Once the thread is made, it is either left its natural color or dyed. The *Boruca* still have a few colors which they dye themselves, but red, yellow, green, and bright blue are bought, generally not as dyes, but as already colored mercerized cotton thread, at the nearest *ladino* town. Due to the relatively high price of these threads, the Indians lamented to the writer that they had forgotten how to make many of the beautiful colors their ancestors knew. In particular, they wanted to know how to obtain a bright blue. As a consequence, the seeds of the broad-leaf indigo were sent them for planting.

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[25] Barrett, 1925, pt. II, pp. 252, 258.

The colors still made by the *Boruca* are black, light yellow, pale blue, and purple. Light brown is obtained by using the natural colored cotton, as stated before. Formerly, red was made by boiling the leaves of the sangrilla tree which is called *rus kra'* in Boruca, and is abundant in the neighboring forests. At present, they do not make this dye, as they seem to think it too much trouble. A fast jet black is procured by cooking the bark of a tree called *carbonero* (*Guarea guara* (Jacq.) P. Wil.) in Spanish, and *griſin-kra'* in Boruca, and combing the liquid with a black clay found in the vicinity. Light blue is made from a narrow-leaf indigo (*Indigofera suffruticosa* Mill.) which abounds by the river. The leaves are boiled for dye. Purple is obtained on the sea coast near Punta Mala and Dominical. Here a mollusk (*Purpura patula* Gould), called *la morada*, is gathered at low tide off the rocks which jut out of the water along the shore. Formerly, the Indians swam out to the rocks with the cotton thread on top of their head to collect the animal.[26] The *Boruca* have no tradition of any of this. At the present time, they gather the mollusk when the tide is out from the shore, and from the rock they can reach by wading. Great pain is taken not to let the creature die. On obtaining the mollusk, they first turn over the shell so that the sea water runs out. Then they blow into the shell, holding the thread in front. The angry animal spits out a fluid on the thread, after which he is thrown back into the sea. This fluid is at first a greenish-yellow, but when dry, becomes deep purple.[27] They say that the ink is best when the moon is full, and no good when the moon is new. At other times, the color is not so strong, nor does it dye evenly. This dye has long been prized not only by the Indians, but also by the Spaniards who demanded purple thread, during the Conquest and the colonial period, as tribute for the church as well as for themselves.[28] For a more complete discussion of this purple dye in other parts of Central America, see MacCurdy.[29] Another, not so strong, purple dye is gathered from a small mollusk (*Purpura kiosquiformia* Duclos) which lives on the roots of the mangrove trees (*Rhizophora Mangle* L.). This creature must be killed to be of use. The soft part of the shell is removed, and the liquid it contains is put on a thin stick and *drawn* on the material in the same manner as using a colored pencil. When first applied, the liquid is black, but it turns purple on drying. This is employed very seldom today, as the little weaving that is done has generally woven designs, and is not painted.

The actual weaving is done by the women seated on the low bench that is characteristic of the *Boruca* (see p. 13). The loom used is horizontal with a warp beam and a back strap, the other end of the loom being fastened to the wall of the house or to a tree (see fig. 9, *d*). The crossing of the weft is accomplished with a straight wooden rod, after which the woof is pressed into position with a wooden sword slightly longer than the width of the cloth. A shed stick is used, but there is no heddle rod. The width of the web is kept even by the temple, which is a piece of cane, preferably the part near the inflorescence, with a bone point at each end (see p. 18).

The cloth woven by these people is usually heavy with a stripe design (see fig. 7, *d*). Some women, however, weave a conventionalized geometric pattern horizontally across the white space between the stripes (see fig. 9, *a*), not permitting the design to appear on the reverse side of the cloth. This is a single-faced weft-pattern weave, and is a technique unknown elsewhere in Central America. It has been found in ancient graves on the Ecuadorian coast, by the island of Puna.[30] Men's belts are also striped, although the thread used and the weaving is finer than that of the skirts.

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[26] See Cockburn, 1779, p. 112.

[27] According to Dr. W. J. Clench, Museum of Comparative Zoölogy, Harvard University, this dye is a drug used by the snail to anesthetize its victim.

[28] See Fernández, 1907, vol. IX, pp. 353–54; Cockburn, 1779, p. 112.

[29] See MacCurdy, 1911, pp. 160–61.

[30] Information given to the writer by Professor Carlos Zeballos M., Director of the Municipal Museum, Guayaquil, Ecuador.

**Bags.** Bags (fig. 8, *b–3*) are woven only by the men. They are made by cutting strips of *majagua*, *pita*, or whatever material is used, very, very thin. This is then twisted into a fine cord. The bag is started from a circle of this cord. The end is passed through this, and a knot is made, leaving a loop. Once the circle has been started, the whole is put on the ground, and the maker puts his heel on top of the center. Two knots are made, one on each side of a loop, each time the cord is passed through a loop. When the work is large enough to be managed more easily, it is taken off the ground and held between the knees. Some bags are made with only one knot at each intersection. Bags are used for carrying the gourd water bottle, for keeping materials, and for carrying or keeping odds and ends.

**Hammocks.** The *Boruca* men make a hammock, from *majagua* (see fig. 8, *b–6*). The weave is coarser than the hammocks made by the *Bribri* from the same material. In hammock-making, the strips are twisted tightly and fastened around a stick which is placed horizontally at each end. The weaving is done with the fingers. Each time the strip is woven in and out of the spaces left by the original strips and then looped over the sticks at the end. When the hammock is finished, a turkey or chicken thigh bone is usually substituted for the sticks, and acts as a link between the hammock and the rope which ties the hammock to the wall.

**Hats.** One or two Indian men occasionally make straw hats from the leaf of the *sem-kra'* (see p. 7). The leaf is first dried in the sun, then cut into thin strips, and the hat is woven basket-fashion, commencing from the center of the crown. This whole technique is not common to the *Boruca* and is probably borrowed from the Chiriquíanos who are found scattered through much of southeastern Costa Rica. The hats are made to sell in *ladino* towns, and are seldom used by the *Boruca*.

**Bark Cloth.** Today, the *Boruca* do not profess to use bark cloth or *mastate* (fig. 7, *c — 4*) as part of their dress, nor do they use it any longer for sails (see p. 15). Occasionally, bark cloth is used as a blanket for sleeping. The *Boruca* claim to have worn *mastate* as late as 1933, when they had easy access to the coast and the *mastate blanco* tree which grows there. In view of the fact that it is frequently acquired from the neighboring *Cavagra* or *Cabécares* (see p. 24), it is quite probable that the *mastate* is used, not only in place of blankets, but also as loin cloth by the women. *Mastate* can be made from two trees. One tree is the *mastate blanco*, or white *mastate*, which the *Boruca* prefer, and which, as we have seen, grows on the coast. The other tree is found in the interior, and is known as *mastate colorado*, or red *mastate* (*Brosimum utila* [HBK] Pittier). It is the tree still used by the *Cavagra* for making bark cloth, but apparently was not utilized by the *Boruca* unless it was absolutely necessary. Both trees have a milk, but that of the red *mastate* is sometimes used for drinking, while that of the white is never taken. To make the cloth, a piece of bark is cut off and rolled at right angles to the grain, then beaten with a wooden stick to take off the rough outer surface, after which it is beaten with another club whose surface is grooved. It is then soaked in water and pulled to the desired size and put in the sun to dry, having pieces of wood or stone placed on the outer edges to keep the cloth from contracting.

**Bone Objects.** The use of bone amongst the *Boruca* is rather curious. It is the material employed almost generally for spindle whorls, and always for the needle-like pieces which are the temple, and are used to pin the woven cloth already on the loom so that it does not lose its shape while the rest is being made. Furthermore, the thigh bones of wild turkey and fowl are used to connect the hammock with the extra rope from which it hangs. Similar bones serve as handles for the *maracas* (see fig. 10, *c*, *d*). Bone is also used for certain cures, for example, if a baby has dysentery, bone and garlic bracelets are put on its wrists.

**Gourds.** One of the most important everyday artifacts of the *Boruca* is the gourd which grows on the tree called either *guacal*, or *jícara*, depending on the shape of the fruit. This tree scientifically is known as *Crescentia Cujete* L., and the tree, as well as its fruit, in English, are all called "gourds." The *guacal* is round, while *jícaras* are oblong.

The gourds serve many purposes. They are, of course, used as drinking cups, for holding liquids, in the kitchen, and for carrying water to the fields or on trips. Interestingly enough, a ring base to sustain the gourd erect does not seem to be known, the vessel being placed on the ground and balanced by rocks or the legs of the *fogón*. In addition to the uses mentioned above, gourds are used as bee hives (see fig. 4, *d*), as a receptacle for the spindle whorl while making thread (see fig. 5, *c*), for carrying seed when planting, and are employed extensively as sieves. The use of the gourd as a sieve is very common amongst the present close neighbors of the *Boruca*, the *Talamanca* peoples.[31] For use as a sieve, the gourd is covered with holes made by a combination cutter and puncturer. This tool has a handle of pejibaye palm in one end of which a forked piece of metal with one prong longer than the other is inserted and bound by string. The longest prong is shoved into the gourd until the shortest penetrates the outer surface deeply enough to cut a line in a circle. This operation has the double effect of making a circular hole and at the same time a line design around the aperture (see figs. 7, *b–8*; 7, *c–3*). Gourds are also made into *maracas* or rattles to accompany the drum at celebrations (see p. 29). There is no rule about the decoration of the gourds. They are either left untouched, or are carved in various designs, the most popular of which is the leaf motif, although animal figures sometimes appear. The patterns are cut with a knife, and left to turn a darker color with time.

**Glues.** Glues are rarely used by the *Boruca*. A glue that is used for mending vessels, or, at times for water-proofing the dug-out canoes is made from a small palm (*Elaeis melanococca Gaertn.*) called in Boruca *tuskra'*, *tus*, meaning "short," and *kra'*, meaning "plant." This palm has thorny leaves and red fruit (see p. 15). To make the glue, the trunk is cut in pieces and spread out in the open so that the dew has easy access to the sap. The following morning, the residue, which is the glue, is gathered.

**Pottery.** Very little pottery is now being made by the *Boruca*. The European war, however, has caused iron cooking vessels to become practically unobtainable as well as prohibitive in price, and the Indians are slowly reverting to make their clay cooking pots as before. There are several common pottery shapes. One kind is a large vessel with a pointed base which is slightly rounded, and a projection near the base, the neck indented, and a projecting rim. This type is called *kvurɛ'* in Boruca, and resembles the Spanish *tinaja*. Other forms consist of smaller vessels with rounded base and a flat protruding rim, at times with a projecting nubbin, as if an attempt to portray a head, tail, and wings, such as is encountered on the pots found in ancient graves; and sometimes the *comal* or indented clay dish which is used for frying. Plain rounded vessels, often with a thumb-nail design on the border or rim, are common for cooking.

Women are the potters. The usual way of making a vessel is to mash the clay, if soft, with the hands, and if hard, with a stick, until it is fine. Then a coil is made of this clay, and the coil doubled over to give more strength to the whole. The base is started with these coils in the manner of a large tortilla, or corn cake. A rounded wooden mold is used only for the base. The clay tortilla is put in the mold and shaped to the sides. Then coils of clay are added, and the vessel grows above the mold. Smoothing and evening are done with the hands. Once completed, the pot is left from fifteen days to one month within the house to dry. The excess clay is then removed with a knife, and the vessel is polished by rubbing it all over with a seed which comes from a vine called in Spanish *ojo de buey* (*Mucuna urens* [L.] DC.). A bed of firewood is made outside the house, and the vessel is placed in the center. Firewood is stacked around the pot until it is covered. Fire is set, and the wood burns away leaving the vessel intact. When a particularly strong pot is desired, a *masa* is added. This *masa* is ground corn mixed with water to form a paste. It is put both inside and outside of the vessel at the moment it is removed from the fire, and while it is still red from the heat. After the pot is cold, the *masa* is removed.

**Rubber.** The use of rubber does not seem to be very ancient with the *Boruca*. The gum from the wild rubber tree which abounds in the vicinity (*Castilla fallax* O. F. Cook) is occasionally used on the dug-out canoes. This rubber has to be beaten before applied. It is put on cracks or fragile places in the boat, and the glue from the *tuskra'* palm (see p. 19) is put on top of this (see p. 15). Pieces of old rubber inner tubes collected from the coast are used by the boys for sling shots (see p. 8).

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[31] Skinner, 1920, pp. 66–67.

**Skins.** Hides are sun-dried without any preservative, buzzards and chickens being allowed to pick the skin clean. They are used for beds (see p. 13), to dry cotton (see p. 16), corn, and other grains (see p. 9), and for drums (see p. 29).

**Wood and Stone.** Wood is important for the houses of the *Boruca* (see p. 11), for the low benches, mortars to husk grains, shafts of agricultural implements, weaving implements, canoes, fishing gear, and, occasionally as hives for bees. The only use of stone at present is for grinding corn and cacao.

**Miscellaneous.** Candles are made from wax of the *jicote*, a wild bee, and from the wax of the wild wasps. Clothes are washed with *jaboncillo* (*Leguminosae* sp.). This is a vine which grows near the river Diquis. The roots only are used, and are cut into pieces and mashed. When mixed with water, suds are produced, and it is an effective cleansing agent. Brooms are made of fern leaves tied to wooden handles. Cocoa-butter is found in every Boruca household. The women rub it in their hair so their hair will shine. It also has a common use as a salve for certain remedies, such as boils or sores on the legs. To make the butter, the cacao bean is toasted and then boiled. The grease rises to the top, and then is skimmed off and put on a *bijagua* leaf (see p. 9), or in a gourd, to cool and to solidify. The liquid remaining in the pot is drunk. This is called *tivia* in Spanish and *kao* in the Boruca tongue.

## *MEASUREMENTS OF TIME*

The first four hours of the day are told by cock crows.[32] The Indians talk of the "first crow of the cock; the second," etc., up to the fourth. From then on the telling of the hour is dependent on the breaking of dawn and the sun. The *Boruca* also watch the moon, using its various stages during the month as a gage for planting and even for cutting a tree. They also calculate the divisions of the year by the moon as well as by the calendar of the *ladinos*. Most of the Indians have no conception of their age. The numeral count of these people runs from one to eight, Spanish being used for the remaining numbers. Foodstuffs are measured by hand-fulls or by gourds. There does not appear to be indigenous methods for weighing.

## *LIFE CYCLE*

**Birth.** Before the birth of a child, as well as after the birth, the house is purified with the incense of copal (*Protium costaricense* [Rose] Engler) (see p. 24), mixed with castor oil, or, sometimes, with the oil from the copaiba or *camíbar* tree (*Prioria copaifera* Griseb.) which grows in the Diquis Valley. The oil is used only as a binder, and to add to the burning quality. This mixture is put in *comales* (see p. 19) under the bed. The mother is given a purgative of *cordoncillo* (see p. 11), both before and after the birth, and is also given the liquid left from boiling the bark of the *camíbar* tree. The umbilical cord is cut with a knife made of cane, *caña blanca* (see p. 8). The end of the cord is burned with *tocolote*, the colored cotton. White cotton is not used. The cut part is buried where the child is born. In cases when the cord is slow to fall off the infant, the dust from the *bajareque* of the house wall is mixed with cinnamon and applied to the babe. After birth, the child is bathed in the liquid remaining from boiling three plants. One is a grass which grows in the savanna and is called *trik-kra'*. This is a very fine grass that has a little root resembling *tiquisqui* and yellow blossoms. The other plant grows by streams and is called *təʃu-kra'*. Pittier does not mention *trik-kra'* but cites *tshu-krá*,[33] and gives the same use for it. Standley,[34] following Pittier,[35] spells the Boruca name as *tsú-krá*. Both writers identify the plant as *Cuphea utriculosa* Koehne. The third composite of the bath is the bark of a tree growing along the Diquis River, which tree is called *sotacaballo* in Spanish (*Pithecolobium latifolium* [L.] Benth.). It is supposed to give luck and strength, because of its hard wood, to the child. The baby is then given a bracelet, and, frequently a necklace, which are made of tiger and caiman teeth and black and red and black seeds called *neno* or *nene* in Spanish, the black come from the male tree, and the red and black from the female. Pittier reports a similar seed used, but does not give its name, merely claiming that it comes from a small tree (*palo*). In addition, he adds, that the metacarpus of the wood rat and the second joint of the leg of the beetle or a member of the *Coleoptera* family, and the skulls of guatusas, a member of the rodent family, were used on the bracelet, strung on cotton thread, and wrapped three times around the arm. He states that this was to plant virtue in the child's heart.[36] Today, none of these last-mentioned items are seen. Even the teeth, which are used at present, and are supposed to bring strength to the child, are often replaced by coins.

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[32] Pittier, 1941, p. 84, also calls attention to this fact.

[33] Pittier, 1888, p. 93.

[34] Standley, 1937, p. 761, pt. II.

The mother is bathed for three successive days with a liquid made from boiling the leaves of the *guayabo* tree (see p. 6), and the leaves of the *kuɛt* or *sotacaballo* to strengthen her. In addition to this, she does not drink milk or coffee, nor does she eat pork, nor wet her hands, nor touch food in the kitchen for fifteen days. She does not resume relations with her husband for forty days. However, at least four times a day, she drinks a brew made from the root of *kɥikʃ·as* or *cordoncillo* (see p. 11) This is taken to stop the lochia. The mother is up after two days, at the most, but does not resume regular work for eight days.

When the baby is between nine and ten months old, he is weaned, and fed atol made of rice and of corn.

**Puberty.** There is no evidence of puberty ceremonies. When girls begin to menstruate, which occurs between twelve and fifteen years, they are given *kɥikʃ as* to drink so that they will not flow for long. The women say that only "stupid *ladinas*" flow for days and days. It is said, the *kɥikʃ·as* stops the period usually within three days. Four days are considered too long a time. A cloth is used to catch the flow, and some women say that formerly *mastate* (see p. 18) was used. Some women also say that, at present, nothing is used, and the blood is allowed to drip down the legs. The only tabu on women during this period is that they cannot participate at a *fiesta*, nor can they serve chicha or food to the men. The menstruating women can watch the gaiety, but must stay apart.

**Education.** Both sexes as children help in the fields, and the girls assist in the kitchen from a very early age. They also learn to make thread, but very few show interest in weaving. The boys make string bags, rope, and hammocks, and sometimes learn to carve gourds.

The *Boruca* children are sent to the local school which is run by the Costa Rican Government. The school masters, two in number, are from the central plateau, and until recently, little or no interest was taken in their job. They often were young men who were forced economically to take a post in an outlying Indian group, and who resented the fact, living only for their vacation and the day they might have sufficient friends of influence to permit their transfer to the capital. As a consequence, they frequently lived with Indian girls, and occasionally produced children whom they never bothered to support. The present inspector of the Indian schools and the actual Government, however, are doing their best to change much of this. The Boruca language is being encouraged and taught along with Spanish. A large blank notebook is being filled with the help of the older generation, and an attempt is under way to gather legends. One thing is certain, the younger generation is now obliged to study their own language. This was unheard of a few years ago.

**Marriage.** There is no particular ceremony in connection with marriage amongst the *Boruca*. The few customs that did exist are slowly disappearing. In some families, the parents of the girl still arrange the match. There are, however, no exchange of presents, nor any similar ceremony, only mutual agreement. In the majority of cases, the young people decide for themselves with whom they want to live. Whether the match is prearranged or not, a system of trial-marriage is always customary. The young man moves into the house of the girl. He helps her family with work in the fields or hunting, and he lives with the girl. There is no sort of ceremony. When the couple feel contented with one another, and ready for the responsibility of their own household, they build themselves a house and leave the parental one. Nowadays, when the priest appears on his bi-yearly visit, the couple frequently marries in the church, and it is quite a sight to see long-married couples with children, and who have suddenly decided to have a formal marriage ceremony, line up before the church door to be "married." On these occasions, a "marriage shawl" is sometimes used. This is a substitute for the colonial Spanish-American custom whereby the priest in Roman Catholic marriages places a gold chain over the couple. The shawl is handwoven with a white background and a few purple and red lines. The red lines are shorter and border the ends. They are woven in a diamond-shaped pattern. The present shawl is about fifty years old, and is badly eaten by moths and bugs. It is so seldom used that it will probably be permitted to fall into decay without being replaced.

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[35] Pittier, 1908, p. 162.

[36] Pittier, 1888, p. 93.

The tribe itself is not concerned with "morality" in the western meaning. Both men and women often have a lover in addition to their spouse. Unlike the neighboring *Cavagra*, who have remained more isolated from white influence and are often blindly jealous of their women, the *Boruca* pay little attention to sexual wanderings. A man gives his love food, and nowadays, occasionally money. A woman takes her illegitimate child home to her husband's house. The cases of illegitimate children are interesting in that a woman apparently has a child only when she wants one (see p. 26). The writer could find no case of divorce in Boruca, although she was told that nowadays it does exist particularly amongst the Indians who have contact with the *ladino*-populated coast. Formerly, it was unknown, but today a man leaves a woman, or a woman a man, if they feel like it.

**Death.** Whatever ceremonies existed amongst the *Boruca* in regard to death have almost entirely disappeared. It is interesting that the *Boruca* do not cry at funerals. At the wake, there is a feast the size of which depends upon the economic status of the deceased. Coffee and chicha are always served as drinks. The women put the body, at times with the hands folded as in prayer, on a long wooden bench or on wooden tablets, and cover it with any piece of cloth available. Three candles are placed alongside the body, one at each side of the face and one at the end. Sometimes, a candle is put by the feet. Prayers are recited all night during the wake. In the morning, men tie the body with fiber rope to the bench or planks, fastening to them two poles horizontally to serve as handles, and generally carry the whole to the church. Here an Indian, the warden, officiates in the absence of the priest. After the Mass, or the few prayers if there is no priest, the body still on the bench (see fig. 10, *a*), and still covered with cloth, is carried by the men to the cemetery, friends of the dead following. Here, bench and all, it is deposited in a shallow grave (about 4 feet), and very infrequently, leaves or flowers are scattered over or placed on it. When the deceased leaves no relative, his extra clothes are placed under his body and used as a bed in the grave. If the dead has enjoyed a good position within the community during life, then a small tunnel is made in a side of the grave, and the body is placed there. This is called a "tomb." When a child dies, the body is tied in a white cloth and the one accordion in the village is played all the way to the graveyard. The whole town accompanies the body.

One year after the death of an individual, the *Boruca* celebrate what is known as the "birthday" of the death. Another feast is given at the house of the deceased. This feast must have a lot of chicha, and often lasts until the following morning or until the chicha disappears.

## *SOCIAL, POLITICAL, AND ECONOMIC ORGANIZATION*

**Land Tenure.** The *Boruca* consider the territory in which they live as the property of the tribe at large. Legally, the Costa Rican Government has not yet made a reservation of this section. This is due, perhaps, to the relative remoteness of the area from the towns of the central plateau, and to the very broken nature of the terrain. It may also be partly the result of the hostile attitude of the *Boruca* to any stranger desiring to settle amongst them. No non-Indian has property in this region.

Each family has from three to five *manzanas* for their own use, often as far as a league (3 miles) from the village. This is their "farm," and is worked continuously until the soil runs out, then a new spot is selected, and the forest cleared to start again. The village, as a whole, has a *manzana* for cultivation for the church. Each individual is required to do his share of work on this land. The Indians go in groups to clear the field and to plant it with corn, rice, beans, and sugar cane. Formerly the church had cattle, but this situation no longer exists in Boruca. When the crops are gathered, they are stored in a special room in the parish house to be kept for the use of the priest on his bi-yearly visits, or for the poor when the farming year is bad. Unfortunately, nowadays, this custom is slowly disappearing.

It is said that up to only a few years ago, the town also had its field, and that there were no individual small farms as there are today. The great number of barren hills which are commonly called "savannas," and which clearly retain the vestiges of former tilled rows (see fig. 10, *e*), serve as silent proof of the authenticity of this tradition, as well as to the Spanish reports of the great number of Indians who inhabited this region at the time of the Conquest. The savannas today are of particular importance to the *Boruca*. Economically, these savannas furnish the roof of the house (see p. 12), and the food for the few animals which these Indians possess. Besides this, they yield a grass that is considered necessary to use in the bath of the new-born child (see p. 20), and a grass which is often used to make *maracas* (see p. 29). Consequently, no one is allowed to fence off the savannas, and the Indians complain bitterly because many of these fields are being lost to nature, who is reclaiming her own.

**Property and Inheritance.** The oldest male member of the family distributes the property at the death of an individual. If the male members are too young, then the oldest female member does the dividing. Concerning the property, we may judge the economy of the tribe as a whole, more or less clearly from the situation in Boruca, the largest single community of these people.

Cattle is a rich man's privilege in Boruca. Amongst the three hundred and twenty-four inhabitants, there are only one hundred cows. These are owned by sixteen individuals, no man having more than six. There are forty-seven houses in the town, however, and there is an ox for the majority of the households, at least one or more pigs, and numerous chickens. In addition to this, there are four bulls, each one with a separate owner, and twenty horses divided amongst six people. The pigs are raised to sell to the *ladinos* and to eat. The cows are seldom killed, but are used as a medium of wealth, to sell, or to pass on as an inheritance. The cows are seldom milked.

**Social Organization.** A few vestiges of an older communal relationship are seen in the former lack of individual farms, and today, in the *juntas* or "get-togethers" of the Indians. When a new house is to be built, the man who wants to erect it calls upon his friends for help, after he has collected the necessary material. They all join together, and the construction is ready in a short space of time, the owner giving chicha, and often food to the helpers. It is interesting to note also that on one day a year, designated now by the police chief, but formerly by the council, the men gather to cut the grass and to "clean" the village of Boruca. They go systematically from house to house, and cut all the weeds in sight. This helps to maintain Boruca as a cleared, sanitary spot.

**Political Organization.** Most traces of political organization have disappeared. The outstanding authority is the police agent, who is an Indian, but is appointed by the Government of Costa Rica. He is, however, dependent to a certain extent upon what remains of the former all-powerful council. The council is composed of the four or six oldest men, and they approve or disapprove of the police appointment. If they disapprove, a new agent has to be named. Formerly this group selected the *cabildo*, but this has disappeared today. The chief duty of the council is to select the first and second mayordomos of the church, and the two women who are to cook for the church. These personages function during *fiestas* or the visits of the priest, and are appointed yearly. If there is a change in the personnel, the former mayordomo has to hand over all the religious symbols and whatever money there may be to the new one.

**Exchange and Distribution of Goods.** The *Boruca* amongst themselves are in the habit of exchanging foodstuffs. If a family lacks a certain commodity, for example corn, a transaction can be made with another party on the strength of a promise to return the item at the next harvest. The personal word of one Indian to another is very respected.

Salt (see pp. 8–9) was formerly an item of trade with the neighboring *Térraba*, *Cabécares*, and *Bribri*, who inhabit the areas farther inland, as well as with more distant *Talamancan* peoples. Reports of Boruca trade with salt as the chief article of commerce exist from as early as 1697. In that year, two priests, Francisco de San Joseph and Pablo de Rebullida, from the *Talamancan* missions, wrote:

> . . . . these (Indians) bargain with the Borucan and Texabas (Térrabas), they give them cotton "mantas" (skirts) painted which serve as covers on tables and curtains, and the Borucas give them salt, axes, machetes, dogs, and other things.[37]

Pittier[38] noticed that in the latter part of the nineteenth century, the *Borucas* frequently went to Puntarenas "carrying hides, cocoa-butter, blackberries, pineapples," etc., and that on the return trip, they brought "articles of prime necessity." He notes also that the *Viceitas*, a *Talamancan* people, came in August to trade with the *Térraba* and the *Boruca*. The *Viceitas* brought "cacao, hammocks, bags, iron pots, knives, and various objects of English and North American manufacture. They exchanged these goods for *mantas*, salt, calves, turkeys, dogs, etc." And that they also sold a certain kind of white *manta* which was larger than that of the *Borucas*.

The *Viceitas*, who are the *Bribri*, still come around August, and are famous for their bags and hammocks. Practically all of the string bags and the best hammocks found in Boruca are of *Viceita* manufacture (see fig. 8, *b–2*, *4*, *7*). As late as 1942, the *Boruca* would exchange a kilo of salt (rock salt) for a cow or several calves, or a smaller amount for copal, which does not grow around Boruca, but is common in the Talamanca mountains, or for *mastate* (see p. 18). Since 1942, however, the Government monopoly on salt has tended to stop this ancient custom. The *Boruca* have had to make their salt more or less in contraband, and to reserve most of the little salt they are able to make for their own use. This, and the high price of Government salt has left the other tribes, and in particular the poorer *Bribri* in such straits that they are forced to frequent the *salitres* or salt deposits which are found in their area and chew the earth as cattle do in order to extract the mineral.

## *RELIGION, MAGIC, ETC.*

The *Boruca* are professed Roman Catholics. The priest visits the community about twice yearly, and baptizes, marries, and confirms all at once. Very little vestige of old beliefs remains, and those that do, are generally well disguised with a covering of Catholicism. On the day of St. John the Baptist, the *Boruca* go at midnight to the creek which runs through the town and bathe. December eighth, the Roman Catholic feast of the Immaculate Conception, is the religious holiday of the town of Boruca, which we must remember is called in Spanish "Nuestra Señora de la Concepción de Boruca." This is the time the priest makes one of his bi-yearly visits. Mass is held, after which the people hold a solemn procession throughout the village, up and down the rolling hillocks. The Virgin of the Immaculate Conception is carried, in the procession, by four women picked by the priest. A food bazaar is held in the church yard, and the only ancient vestige that can be seen is the dance of the *negritos* (see p. 29), who generally precede the procession, but sometimes appear later in the day. This variation depends upon the priest. Frequently, the priest feels that the dance is too pagan and should not be performed in the solemn march.

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[37] See Informe, 1697.

[38] Pittier, 1891, p. 105.

**Superstitions and Beliefs.** There are certain superstitions and beliefs peculiar to the *Boruca* which may be associated with their former credence. When planting, the Indians water the newly sown seeds with water mixed with soil from the cemetery. This is supposed to keep the rats and other rodents from eating the seeds. All the Indians are afraid of thunder, believing that it is closely allied with bad luck. When it thunders in the hills on the east side of the Diquis or Térraba River, the *Boruca* say that a large snake is moving his tail. This snake used to live near El Sapo, in these hills, but when Monseñor Thiel, the former Archbishop of Costa Rica, passed through this region on one of his missionary trips, the snake moved, from fear of the Archbishop, to the headwaters of the Balsar River, west of the Diquis River. Here he is today, in a very steep and isolated spot where no one can find him.

When it thunders toward the south, they claim that the two pejibaye palms which grow on the summit of the Hill of the Sorcerer are angry. The wind that blows at night is a soul in pain. It is interesting that the Indians still tell, and actually believe, that without the help of the *sukia* [38a] there would not now be game around Boruca, and so, of course, all the people would have died. They say that eighteen years ago there was no game in the vicinity. A *sukia* from Talamanca was summoned. He went to a high mountain which lies south of the present village of Boruca. This mountain is called "El Cerro del Encanto," or "Hill of the Sorcerer." A great noise was heard. When he returned, there were many wild peccary in the neighborhood. They still recount and believe that "Tatica Cuazarn," the mythical sorcerer who lives on the Hill of the Sorcerer, used to visit Boruca and drink and eat with the people. He was always dressed as an old man, and none knew him on these visits. He came incognito so that he could find out what in truth was passing amongst his people. Although the Indians say that formerly the Hill was a gathering place for their secret tribal meetings, no Indians will go there today, even though there are supposedly wild cattle there, and cattle are economicaly very important to the *Boruca.* This cattle is held to be the property of "Tatica Cuazarn," and cannot be touched. The *Boruca* recount that one of them went to the Hill hunting, and saw a man bathing. He started to shoot the man, but his gun wouldn't go off. This man was, of course, "Tatica Cuazarn." Cuazarn has a son who is called Sankrao, and who lives in the mountains of Golfo Dulce.

North and west of Boruca, there are certain lagoons which the Indians do not like to pass, and never will go by them if they are accompanied by dogs. One of these lagoons is the "Laguna de Danta." Here, "Mamram" is supposed to dwell. "Mamram" in Boruca signifies witchery.

If one goes hunting, it is not good to say to him, "God be with you," because one will have bad luck.

**Sickness, Curing, and Shamanism.** Shamanism as such is not practised any longer amongst the *Boruca.* Formerly the *Boruca* had real shamans, whom they called *bruk-bri*, but they have long since disappeared. The power of the shaman, however, is still respected, and when a grave sickness appears, or a great misfortune affects the tribe or village, the *bruk-bri* is sent for from some of the *Talamanca* peoples, chiefly the *Cabécares.* These peoples call the shaman, *sukia*, and the one who travels to Boruca is known as the *cacique sukia*, the title being derived from the word for shaman and the widespread Costa Rican word for chieftain. The *cacique sukia* is held in deadly respect by the Indians. Chicha, as well as the most attractive girl in town are offered to him on his visits. When curing, the *sukia* stays outside behind the house, all night, and smokes incessantly. He then enters and blows smoke on the patient. The *sukia* does not accept money, and only at times will take presents of a pig or food.

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[38a] See below.

*Curanderas* or female witch doctors, for whom no word exists in the Boruca language, are part of the community. However, the lore is handed down from mother to daughter, with the result that the women of certain families are famous for curing powers, whereas other women of the community have none of this learning. Along with a more than general knowledge of herbs, roots, and plant life, the witch doctor must have a therapeutic sense combined with an instinctive knowledge of psychology. For this reason, in spite of the fact that the witch doctor passes her secrets on to all of her daughters, only the one or ones who are lucky enough to have such qualities practise. At times, when there is no female offspring, or when none is suited to practise, the *curandera* has been known to adopt a girl and train her to follow in her trade.

The witch doctors do not receive the same reverence that the *sukias* receive, even though the witch doctors are *Boruca* Indians and have more opportunity to practise on the people. This, and the fact that the witch doctors are women, while the *sukias* are male, may, of course, be the very reason why they are not feared. At times, however, the *sukia* has been known to teach the witch doctor some of his secrets, and it is certain that the *curandera* is highly respected by both sexes. Although the *curandera* is principally interested in female sicknesses, both men and women consult her.

Strangely enough, the most intimate details of the life of a patient are discussed openly with the witch doctor, even in the presence of a member of the opposite sex. Unlike the *sukia*, the *curandera* will accept pay for her services.

In addition to her use of plants, the witch doctor sometimes employs some form of sorcery to impress her patients. A favorite method is to tie a thread, preferably a silk one, around the little stones called *sukia stones*, which are found in the ancient graves, and to hang them from the hand or from the ceiling of the house. The *curandera* reads the answers to the questions asked her by the patient from the manner in which the stones swing.

One of the most important functions of the witch doctor appears to be the control of birth. The *Boruca* have long been famous for having children only when they feel like it, not using an abortive, but a preventive or a provocative, as the case might be. They are very reticent to admit even the existence of such a practice, however, through fear of the priest and of the Costa Rican Government, which in the past has persecuted the Talamancan peoples for this, as we shall see further on.

Both processes are brought about by taking certain liquid preparations given by the witch doctor. The sterilization process is called a *curada*, and when a woman has one or two children, the Indians say quite frankly that she is *curada*. It appears possible to be *curada* and then go to the *curandera* and become pregnant when one wants. Both remedies are drinks made from certain leaves, fungi, roots, and ferns. The sterilizing brew must be taken for fifteen days, stopped for fifteen days, and taken again for fifteen days. If badly prepared or taken too consistently without the interval in between, the drink is said to kill by causing hemorrhages. The neighbors of the *Boruca* all have, at least, the remedy to stop conception. The *Térraba*[39] do not practise it so often today, as the Roman Catholic Church has apparently had more influence on them. The *Térraba* claim that their population has decreased violently since the past century because their women made themselves too sterile, and both sexes began to live together in any manner. They add that because of this, a curse has been put on them and they are dying out. It is a pity there is no census record to serve as comparative material. All of the remaining Talamanca peoples, such as the *Bribri*, the *Chirripó*, and the *Cabécares*, seem also to know this custom. In an unpublished report of Fathers Vincente Krautwog and Augustín Blessing of several trips made by them to the missions of Talamanca in the years 1894 to 1902, the originals of which are in the parochial archives in Limón, Costa Rica, the following statements are significant:

> The women of the Estrella (valley) have very few children, because of certain remedies which they take

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[39] See Pittier, 1891, p. 93.

> without misgiving, publically, in order not to have off-spring. (These Indians were living in Caña Coén.)
>
> I hardly baptized a baby, because a large portion of the women are sterile through a remedy which they take, be it from being deceived, be it from being lost, be it from their own evilness, taking and masticating in the woods the bark and the juice (sap) of dangerous trees. There are about four old women who are most guilty: María Caferina and Margarita in the house of Simeón, Rosalía, mother of Luis Quirós, and María, called "camisa," mother of the woman who lives with Miguel Medina, some four hours distant from Simeón. The evil of this "cure" ("curar"), being so alarming, I wrote a letter to the Mayor (Alcalde) don Lucas Alvarado, in which I authorized the authorities of Estrella to at least threaten these criminal women, in case they could not be intimidated, to take them prisoners to Limón. I attacked strongly on a thousand occasions this evil. . . .

The above was written in the year 1894. In 1897, we find the following:

> The great evil of taking means not to bring forth young, is disappearing, and once again children are being born.

In Buenos Aires which is situated between Boruca and Talamanca, the Chirícano women are said to drink a preparation made by boiling the leaves and stem of *Justicia tinctoria* ([Oerst.] Hemsl.) and drinking a gourd of this three times daily the first day of menstruation. As yet, we have not been able to verify this usage, but it is a curious fact that in the majority of the yards of these people this plant is found. The excuse given for this plant is that it is used to wash clothes, serving as bluing.

The medicine to induce pregnancy is apparently more complicated than that to stop conception. The following is an analysis made by Dr. Reif in the United Fruit Company laboratory in La Lima, Honduras, of this medicine from the *Boruca* Indians:

> A brown liquid with some flocculent precipitate and a strong odor of hydrogen sulfide indicating purition of organic matter. It is an aqueous solution containing some tannins but no alcohols, alkaloide or saponines. After evaporation of the liquid and removal of hydrogen sulfide smell, a strong odor resembling that of Castoreum remained. This odor is possibly derived from glands of some tropical animal since beavers do not occur there.
>
> The tannins would indicate that some bark or barks were used in the preparation. Microscopical examination of the residue did not give any clues.

A few places where such practices as these are known are Africa, the Fiji Islands, and Ecuador.

The following is a list of the more generally known cures used by the *Boruca* and usually prescribed by the *curandera.*

Malaria is treated by drinking the liquid left from cooking the bark of a tree called *hombre grande* (*Quassia amara* L.), and sometimes, from boiling the fruits of the *cedrón* (*Simaba Cedron* Planch.)

For stomach-aches, a vine called in Boruca *so-kra'* (*Philodendron* sp.) is boiled with the ever useful *Kɥikʃ·as* (*Piper* spp.), and drunk.

Dysentery in adults is treated by boiling the bark of the María tree, the guava tree, the leaves and the yuca-like root of the *contrayerva* (*Dorstenia Contrajerva* L.), and the ripe vanilla pod (*Vanilla fragrans* [Salisb] Ames).

Rheumatism is treated by rubbing the afflicted parts with the oil of the copaiba tree.

To stop boils, the leaves of the *kana kra'* (*Conostegia extinctoria* [Bonpl.] D. Don.) are used in combination with a lard made from the marrow of the leg bones of a cow and lemon juice. The lard helps to keep the leaves in place, and is supposed to aid in drawing out the poison.

For snake bites, some Indians, but not all, as the majority go to a *sukia* for this, use the leaf of the *guaco* (*Mikania Guaco* Humb. & Bonpl.). They mash the leaf, soak it in water, and then put it on the afflicted parts. Another remedy for snake bites is to use the bulb or root of the *Strychnos* or *curarina* vine (*Strychnos toxifera* Schonb. ex Benth.). This is cut into pieces and mixed with the *guaco* leaf and boiled very well. The resulting liquid is drunk. The most effective remedy for snake bites, however, seems to be the resin from the *caraña* tree (*Protium* spp.). This tree grows on the coast, particularly near Dominical. The resin is mixed with honey and is both drunk and applied to the bite.

## *FOLKLORE*

Very little remains in the field of legends or myths. Certain ones, told as recently as the time of Pittier, for example, "El Encanto,"[40] are now forgotten. The tales which are still told appear for the most part to be unfinished, half-remembered stories, and are, to a great extent, crude and unsatisfactory. The writer found that the telling of legends was similar, in a measure, to the gathering of language data. Few people remembered details, and no two people agreed on all details. The fundamental note in the tales collected is the importance placed on witchcraft, in spite of the fact that the *Borucas* like to give the impression that they no longer believe nor remember anything about witchery. The following are four myths which are still told by the *Boruca* Indians.

**The "Mamram."** These are two bewitched women. They were orphaned girls who were from Boruca, and who used to fish the crabs and the crayfish in the creek which runs through the town. Each day, as they exhausted one spot, they moved a bit further along the water course, until one day they disappeared completely and did not return.

The shamans, however, found the girls, and tied them up, then moved them to Barranco. You know they are there today, because you can see the stones of their hearth. Their bodies are covered with hair, and they are ugly, not only in appearance, but also in character. They are very mean, and have bothered people so much in the vicinity, that more than one community has had to move. The last place they destroyed was Camakrán by Paso Caracol.

**The Grandfather of the Volcano.** A long time ago, the grandfather of the volcano fell in love with a girl and took care of her. She became pregnant. He brought her partridges, wild turkeys, *paweeles*, wild hogs, wild pigs, and deer. The girl had a son, and she took care of him and raised him until he was six. Then the father came with a great wind and took the boy from his mother, and carried him to his house.

The father continued to visit the mother nightly, however, bringing her dried meat. But the mother would say, "My child is what I want. Where is he?"

The father did not like this, and moved the boy to a different place, and gave him the name of San-kra'-ua so that the mother would not know where he lived.

**The Serpent.** This is a legend which is concerned with the creek and site of Boruca itself. The hole mentioned in the story is still pointed out between two of the undulating hills in the town. The serpent has a mystical connection with the serpent who thunders by rattling his tail, and with the Laguna de Sierpe which forms one of the seven mouths of the Diquis River.

The serpent lived in the hole. He came out, and the woman was behind him at the edge of the entrance. The snake waited for her to give him chicha so he would become drunk, and they would embrace. Then she laughed with the snake. Then they bathed together in the Diquis River. Then the snake went to sleep in his hole, and the woman went to her house to make more chicha, so that day-after-tomorrow again the snake would become drunk. Thus they behaved.

Then the woman became pregnant by the snake. Then the people and the sun knew. Then the mother of the girl bewitched him, so that he was burned hanging.

Then the girl gave birth, and the people stood by ready with machetes to kill the little snakes. They were ready with machetes and with sticks. One little snake did not have a tail. The mother of the girl burned them all. Nothing remained but ashes. The mother felt sorry, and cried for her daughter.

It ends here. All of it.

**The Legend of the Kagδera.** The Kagδera were a branch of the *Boruca* who lived at a site called Vanilla between Curré and Lagarto. They were in the habit of making frequent visits to Drake's Bay, on the coast near the Osa Peninsula. The Kagδera could be distinguished from the rest of the tribe by a golden plaque which they wore on their forehead.

Among the Kagδera was a brother and a sister who lived together as a married couple.

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[40] Pittier, 1941, pp. 93–94.

When the sister became pregnant, the *sukia* or medicine man was very angry and ordered that she be eaten by three tigers. To carry this out, the *sukia* waited until the woman was in a certain spot, and then made her unable to move. He ordered a man to climb a tree to watch and to report what occurred.

At four o'clock in the afternoon, the three tigers came out of the woodland roaring and went right to the woman. Two were spotted with black and one was a yellow lion. The watcher saw them play together and pet her. The woman remained frozen. When they tired of playing, one of the spotted tigers killed her, and they all ate her, all of her, until not even a drop of blood was left to tell the tale.

The watcher was so frightened that he could not get down from the tree until the following day. The rest of the tribe also came at daybreak to find and to talk to him who had witnessed the death of the woman who because she became pregnant by her brother furnished the example for the law that whoever should copy this act would be severely punished.

## *THE ARTS*

**Music.** There are very few genuinely aboriginal instruments left amongst the *Boruca*, and in public, they play no music that can definitely be called their own. The *maraca*, or rattle, is undoubtedly pre-Spanish, as frequently clay *maracas* are found in the early graves. The modern *maraca* is generally made of a gourd and often has little holes at the base to give more sound. The gourd is filled with little round black seeds called *t·akra'*, and attached to a bone handle (see p. 18). Rattles or *maracas* are also made by men and women of a grass (*Arundinella Deppeana* Nees.) which grows in the savanna. This grass is called *suge-r·a'* in Boruca, and *cola de venado* or *cola de chivo* in Spanish. The upper portion when young is purplish, while the lower part and the old grass is the color of straw. The Indians use both the old and young grass, thereby giving the rattle two distinct colors. It is woven with the fingers, the weave used being called *ra-t·a'* (see fig. 10, *c*), and the finished product is filled with corn to make it sound. Drums are round (see fig. 7, *c–5*), and made from a piece of the trunk of cedar or of balsa, and, very occasionally, of the coyol palm (*Acrocomia vinifera* Oerst.). Both ends are covered with wild peccary hide and fastened with thongs of the same hide. They are played by hand without sticks. A *chirimía* or flute-like instrument is made of cane and wood, and is used in a burlesque dance of bullfighting on the first of January, as well as on the eighth of December with the *negritos*. The *zambombia* is an instrument of the *Boruca* which has probably come to them through contact with the Chiriquíans. The *zambombia* is a hollowed stick divided inside into separate compartments. The divisions are made with pieces of the pejibaye palm. The same black seeds used in the *maracas* are put in these compartments, and the *zambombia* is moved backward and forward to produce noise. In the village there is one accordion which also is played at celebrations.

The music on these occasions is almost entirely copied from the Chiriquíans who in turn have received a considerable negro influence. Waltzes are also popular, and some foxtrots are heard.

**Dancing.** The *Boruca* are said to have secret dances. Their two public dances, if so they may be called, that are not copied from the Chiriquíans, are the "bullfight" and the *negritos*. The "bullfight" takes place on New Year's Day. A balsa (*Ochroma Lagopus* Sw.) mask of a huge bull's head painted in black with white lines, and with the horns and the upper part of the skull from a real bull, is put over a framework of a curved piece of wood that has a supporting wooden cross piece. This helps the whole to project from the head of the wearer in the manner of a real bull's head. The mask is usually worn by one of the young bloods of the village. Another man wears a balsa mask of one face with a little face on the chin, suggesting a dual personification (see fig. 10, *b*). These are the only two "characters." Almost all the men in the village, however, put on balsa masks of various types, some with gaily colored paper pasted on the surface, some painted, and some perfectly plain. The object of the "dance" is that all the participants "fight" the bull, the wearer of the two-faced mask being the real "matador." At the end of the "dance" the "bull" is tied and supposedly strangled. This "fighting" is done to the accompaniment of the *chirimía*, *maraca*, and drum (see p. 29) to say nothing of the shouts of the various dancers. On New Year's Eve, the Indians dress in banana leaves and masks, and go to one another's houses, and, according to some, to a secret place to celebrate. On the eighth of December, the council chooses three or four men who represent the *negritos* or black men. They paint their faces with mud and soot, and adorn themselves with the skin of the jaguar or other animal of the forest. One man dresses as a black horse, using for this a hoop-shaped piece of cane from which hangs black cloth cut to represent a horse. The man steps into the center of the hoop and wears it hanging from his shoulders by fiber ropes. The drum, *chirimía*, and *maraca* accompany these merrymakers who dance around, bow to people, play tricks on people, and beg drinks from anyone they chance to see. In fact, they dance from house to house and at each stop are usually given a drink of chicha. The dance itself dates from Spanish-colonial times, and is performed today during religious feasts in many communities from Mexico through Guatemala southward, including the town of Nicoya in the peninsula of that name in Costa Rica.

The other dances which are performed in public are danced only by the younger generation. The steps are entirely borrowed from the Chiriquíans, who formerly and even still inhabit much of southern Costa Rica. The favorite dances are the *cumbia*, the *punto Chiricano*, and the waltz. All of these, with the single exception of the waltz, are danced individually and not by a couple holding one another close.

**Games and Gambling.** The *Boruca* are not a gambling people. They appear to have no interest in any sort of gambling. Dice are almost unheard of, and perhaps one pack of cards can be found in the whole village.

The boys have a game called *cuepas*. This is played with round pieces of bee's wax shaped almost like the cap of a pop bottle. One of these are placed face down, and a boy throws a similar piece on top of it. If the result of the impact causes both pieces to be face up, the boy who threw the *cuepa* wins, and takes the other *cuepa* as well as his own. If the result is otherwise, he loses his *cuepa*. Boys carry a ball of wax in their pockets for the express purpose of making *cuepas*.

Tops, made of wood with a nail serving as the pointed end, are also seen. They are not very popular, however.

# REFERENCES

# REFERENCES

ALFARO GONZÁLEZ, ANASTASIO
1897. Mamíferos de Costa Rica. San José.
1935. Investigaciones Científicas. San José.

KRAUTWOG, VICENTE AND BLESSING, AGUSTÍN
1894–1902. Apuntes hechos por los Misioneros de Talamanca. (Original in the *Archivo Parroquial* in Limón.)

BARRETT, S. A.
1925. The Cayapa Indians of Ecuador. *Museum of the American Indian, Heye Foundation, Indian Notes and Monographs*, Parts I and II. (Misc. Series no. 40.) New York.

COCKBURN, JOHN
1779. The Unfortunate Englishmen. London.

FERNÁNDEZ, LÉON
1881–1907. *Colección de documentos para la historia de Costa Rica.* 10 tomos. San José, París, Barcelona.

GABB, WILLIAM M.
1881. Tribus y Lenguas de Costa Rica. In: *Documentos para la Historia de Costa Rica*, vol. III, pp. 303–486. Published by León Fernández, San José.

INFORME DE LOS PADRES MISIONEROS FRAY FRANCISCO DE SAN JOSEPH — FRAY PABLO DE REBULLIDA
1697. Talamanca. (Documento No. 5226, in the the *Archivos Nacionales* in San José de Costa Rica.)

JOHNSON, FREDERICK
1940. The Linguistic Map of Mexico and Central America. In: "The Maya and their Neighbors," pp. 88–114. New York.

LEHMANN, WALTER
1920. Zentral-Amerika. 2 vols. Berlin.

MACCURDY, G. G.
1911. A Study of Chiriquian Antiquities. *Connecticut Academy of Arts and Sciences, Memoirs*, vol. 3. New Haven.

MASON, J. ALDEN
1940. The Native Languages of Middle America. In: "The Maya and their Neighbors," pp. 52–87. New York.

PERALTA, M. M.
1900. La Géographie historique et les droits territoriaux de la république de Costa Rica. Paris.
1938. Los aborigenes de Costa Rica. *Revista de los Archivos Nacionales*, año II, nos. 7 and 8, pp. 422–29. San José.

PITTIER, HENRI
1888. Viaje de Exploración al Valle del Río Grande de Térraba. (enero-febrero, 1891.) *Boletín Trimestral del Instituto Meteorologico Nacional*, nos. 1–2. San José.
1891. Viaje de Exploración al Valle del Río Grande de Térraba. Vol. III. San José.
1903. Folk-lore of the Bribri and Brunka Indians in Costa Rica. *Journal of American Folk-lore*, vol. 16, no. 60, January–March. Boston.
1908. Ensayo sobre las plantas usuales de Costa Rica. Washington, D. C.
1941. Materiales para el estudio de la Lengua Brunka hablada en Boruca recogidos en los años de 1892 a 1896. *Museo Nacional, Serie Etnologica*, vol. I, parte II. San José.

SKINNER, ALANSON B.
1920. Notes on the Bribri of Costa Rica. *Museum of the American Indian, Heye Foundation, Indian Notes and Monographs*, vol. 6, no. 3. New York.

STANDLEY, PAUL
1937–1938. Flora of Costa Rica. *Field Museum of Natural History, Botanical Series*, vol. XVIII, parts I–IV. Chicago.

STONE, DORIS
1943. A Preliminary Investigation of the Flood Plain of the Rio Grande de Térraba, Costa Rica. *American Antiquity*, vol. 9, no. 1, July, pp. 74–88. Menasha.

THIEL, BERNARDO AUGUSTO
1882. Apuntes Lexicograficos de las Lenguas y Dialectos de los Indios de Costa-Rica. San José.
1920. In Lehmann, 1920.

VALENTINI, J. J.
1862. In Lehmann, 1920.

VÁZQUEZ DE CORONADO, JUAN
1908. Cartas de Juan Vázquez de Coronado, Conquistador de Costa Rica nuevamente publicadas por D. Ricardo Fernández Guardia. Barcelona.

# APPENDICES A-C

*Acknowledgment is gratefully extended to the Botanical Museum and the Museum of Comparative Zoölogy for help in the verification of the botanical and zoölogical terms, appearing in Appendices A and B.*

# APPENDIX A: PLANT NAMES

| ENGLISH | IN COSTA RICA | SCIENTIFIC |
|---|---|---|
| | A | |
| alligator pear | *aguacate* | *Persea americana* Mill. |
| *anda-riel* (see *bejuco de hombre*) | | |
| *Arundinella* | *cola de venado* or *cola de chivo* | *Arundinella Deppeana* Nees. |
| | B | |
| balsa | *balsa* | *Ochroma Lagopus* Sw. |
| banana | *banano* | *Musa sapientum* " |
| banana | *guineo morado* | " " " |
| bean | *frijol* | *Phaseolus* sp. |
| *bejuco de fierro* (iron vine or *bejuco negro*) | *bejuco de fierro* or *bejuco negro* | perhaps *Anthurium scandens* (Aubl.) Engler; *Cydista pubescens* Blake |
| *bejuco de fuego* (fire vine) | *bejuco de fuego* | ? |
| *bejuco de hombre* (man vine) or *anda-riel* (rail vine) | *bejuco de hombre* or *anda-riel* | ? |
| *bijagua* | *bijagua* | *Calathea insignis* Petersen |
| *bijagua*, black | *bijagua negra* | *Calathea* spp. |
| bluing | *azul de mata* | *Justicia tinctoria* (Oerst.) Hemsl. |
| Boruca bean | *frijol de Boruca* | variation of *Phaseolus vulgaris* L. |
| | C | |
| *cabuya* | *cabuya* | *Furcraea* spp.; also *Agave* spp. |
| cacao or chocolate | *cacao* | *Theobroma Cacao* L. |
| cane, white or wild | *caña blanca* | *Gynerium sagittatum* (Aubl.) Beauv. (*saccharoides* Humb. & Bonpl.) |
| *capulin*, white | *capulin blanco* | *Muntingia Calabura* L. |
| *caraña* | *caraña* | *Protium* spp. |
| *carbonero* | *carbonero* | *Guarea guara* (Jacq.) P. Wil. |
| cashew | *marañón* | *Anacardium occidentale* L. |
| cassava (see yuca) | | |
| castor bean | *castor* | *Ricinus communis* L. |
| cedar | *cedro* | *Cedrela* spp. |
| *cedrón* | *cedrón* | *Simaba Cedron* Planch. |
| chocolate (see cacao) | | |
| *chumico* | *chumico* | *Curatella americana* L. |
| coffee | *café* | *Coffea* spp. |
| *Conostegia* | *kana kra'* | *Conostegia extinctoria* (Bonpl.) D. Don. |
| *contrayerva* | *contrayerba* | *Dorstenia Contrajerva* L. |
| copaiba | *camíbar* | *Prioria copaifera* Griseb. |
| copal | *copal* | *Protium costaricense* (Rose) Engler |

| ENGLISH | IN COSTA RICA | SCIENTIFIC |
|---|---|---|
| *cordoncillo* | *cordoncillo* | *Piper* spp. |
| corn | *maíz* | *Zea Mays* L. |
| corozo palm | *corozo* | *Corozo oleifera* (HBK) L. H. Bailey |
| cotton | *algodón* | *Gossypium peruvianum* Cav. |
| cotton, colored | *tocolote* | *Gossypium peruvianum* Cav. |
| coyol palm | *coyol* | *Acrocomia vinifera* Oerst. |
| *Cuphea* | *tshu-krá* | *Cuphea utriculosa* Koehne |
| | D | |
| *disciplina* palm (dwarf) | *disciplina* | *Chamaedorea* sp. |
| | E | |
| *espavel* | *espavel* | *Anacardium excelsum* (Bert. & Balb.) Skeels |
| *Elaeis* | *tuskra'* | *Elaeis melanocca* Gaertn |
| | F | |
| fire vine (see *bejuco de fuego*) | | |
| | G | |
| gourd | *jícara; guacal* | *Crescentia Cujete* L. |
| *guácimo* | *guácimo* | *Guazuma ulmifolia* Lam. |
| *guaco* | *guaco* | *Mikania Guaco* Humb. & Bonpl. |
| *guanacaste* | *guanacaste* | *Enterolobium* (Pittier, 1941, p. 59 classifies this as *Enterolobium cyclocarpum* [Jacq.] Griseb.) |
| guava | *guayabo* | *Psidium Guajava* L. |
| | H | |
| *hoja de duende* | *hoja de duende* | *Bactris minor* Jacq. |
| *huiscoyol* palm | *huiscoyol* | |
| | I | |
| indigo | *añil* | *Indigofera suffruticosa* Mill. |
| *Inga* | *guava* | *Inga spectabilis* (Vahl) Willd. |
| | J | |
| *jaboncillo* | *jaboncillo* | *Leguminosae* sp. |
| | L | |
| little stick grass | *zacate de palito* | ? |
| | M | |
| *majagua* | *majagua* | *Hampea* sp., and other spp. |
| mango | *mango* | *Mangifera indica* L. |
| mangrove | *mangle* | *Rhizophora Mangle* L. |
| man vine (see *bejuco de hombre*) | | |
| María tree | *palo María* | *Calophyllum brasiliense* Camb. var. *Rekoi* Standl. |
| *mastate*, red | *mastate colorado* | *Brosimum utile* (HBK) Pittier |
| *mastate*, white | *mastate blanco* | *Brosimum* sp.? (Pittier, 1941, p. 63, wrongly classified this tree as *Brosimum utile*) |
| May tree, pink | *palo de mayo (rosado)* | *Vochysia ferruginea* Mart.? |
| May tree, white | *palo de mayo (blanco)* | *Vochysia hondurensis* Sprague |

| ENGLISH | IN COSTA RICA | SCIENTIFIC |
|---|---|---|
| | N | |
| nance | *nance* | *Byrsonima crassifolia* (L.) DC. |
| *nene* or *neno* | *nene* or *neno* | *Abrus precatorius* L. ? |
| ñampí | *ñampí* | *Dioscorea trifida* L. |
| | O | |
| *ojoche* | *ojoche* | *Brosimum terrabanum* Pittier |
| *ojo de buey* | *ojo de buey* | *Mucuna urens* (L.) DC. |
| orange | *naranjos* | *Citrus sinensis* (L.) Osbeck |
| | P | |
| pacaya palm | *pacaya* | *Chamaedorea* sp. |
| *palmilera* | *palmilera* | *Socratea* sp. |
| papaya | *papaya* | *Carica Papaya* L. |
| pejibaye palm | *pejibaye* | *Guilielma utilis* Oerst. |
| *Philodendron* | *so-kra'* | *Philodendron* spp. |
| pineapple | *piña* | *Ananas comosus* (L.) Merr. |
| *pita* | *pita* | *Aechmea magdalenae* André |
| plantain | *plátano* | *Musa paradisiaca* L. |
| *poró* | *poró* | (Probably, *Erythrina costaricensis* Micheli; Pittier, 1908, p. 163, identifies this tree as *Erythrina corallodendron* L.) |
| *poro-poro* | *poro-poro* | *Cochlospermum vitifolium* Willd. (Spreng, according to Standley, 1937, p. 713; *Cochlospermum hibiscoides*, according to Pittier, 1908, p. 129; 1941, p. 68.) |
| | Q | |
| *Quassia* | *hombre grande* | *Quassia amara* L. |
| | R | |
| rail vine (see *bejuco de hombre*) | | |
| rice | *arroz* | *Oryza sativa* L. |
| royal palm | *palma real* | *Scheelea rostrata* (Oerst.) Burret |
| rubber, wild | *hule macho* | *Castilla fallax* O. F. Cook |
| | S | |
| sandbox tree | *javillo* | *Hura polyandra* Baill. Pittier, 1941, p. 59, classifies this tree as *Hura crepitans* L. |
| savanna grass | *zacate de sabana* | ? |
| *sem* palm | *sem-kra'* | *Carludovica palmata* R. & P. |
| *Serjania* | *sierrilla* | *Serjania cornigera* Turcz. |
| *sotacaballo* | *sotacaballo* | *Pithecolobium latifolium* (L.) Benth. |
| Spanish plum | *jocote* | *Spondias purpurea* L. |
| squash | *calabazo* | *Cucurbita maxima* Duchesne |
| stilt palm | *chonta* | *Socratea durissima* Wendl. |
| stilt palm, black | *chonta negra* | *Socratea* sp. or species of similar growth habit |
| *Strychnos* | *curarina* | *Strychnos toxifera* Schomb. ex Benth. |
| sugar cane | *caña dulce* | *Saccharum officinarum* L. |

| ENGLISH | IN COSTA RICA | SCIENTIFIC |
|---|---|---|
| | T | |
| termite grass | *zacate de comején* | ? |
| *tiquisque* | *tiquisque* | *Xanthosoma violaceum* Schott |
| tobacco | *tabaco* | *Nicotiana Tabacum* L. |
| | V | |
| vanilla | *vainilla* | *Vanilla fragrans* (Salisb) Ames |
| | Y | |
| yuca | *yuca* | *Manihot utilissima* Pohl. |
| yucca | *itavo* | *Yucca elephantipes* Regel |
| *yuquilla* | *yuquilla* | *Curcuma longa* L. |

# APPENDIX B: NAMES OF BIRDS, ANIMALS, FISH, AND REPTILES

| ENGLISH | IN COSTA RICA | SCIENTIFIC |
|---|---|---|
| | A | |
| armadillo | *cosuco; armadillo* | *Dasypus novemcinctus* Linn. |
| | B | |
| bee (wild) from Caños Island[1] | | *Apis Trigana* or<br>*Apis Melipona*? |
| bee (wild) | *jicote* | *Melipona bechii* supsp. *bechii* |
| bushmaster | *cascabela muda* | *Lachaesis muta* |
| | C | |
| clam | *almeja* | ? |
| crab (river) | *cangrejo del río* | *Pseudotelphusa magna* |
| crayfish | *camarón* | ? |
| croaker | *roncador* | ? |
| curassow | *paweel* | *Crax rubra* Linn. |
| | D | |
| deer | 1) *cabra*<br>2) *venado* | 1) *Mazama sartorii* Saussure<br>2) *Odocoilus* Boddaert |
| | G | |
| guan (crested) | *pava* | *Penelope purpurascens* Wagl. |
| *guatusa* | *guatusa* | *Dasyprocta* sp. |
| | M | |
| macaw (scarlet) | *lapa*; *guacamaya* | *Ara macao* Linn. |
| mollusk (large for purple dye) | *caracol*; *morada* | *Purpura patula* Gould |
| mollusk (small, for purple dye) | *caracol*; *molusco* | *Purpura kiosquiformia* Duclos |
| monkey (red) | *mono colorado* | *Ateles geoffroyi* Kuhl |
| monkey (white-faced) | *carablanca* | *Cebus capucinus* Linn. |
| mullet (fresh water) | *tepemachin* | *Agonostomus monticola* C. V. |
| | P | |
| parakeet | *perico* | *Aratinga canicularis* Linn. |
| parrot | *loro* | *Amazona auropalliata* Less. |
| perch | *mojarra* | *Cichlasoma altifrons* Kner. & Steind. |
| pig (peccary) | *chancho del monte* | *Pecari angulatus* Cope |
| pig (wild boar?) | *cariblanco* | *Tayassu pecari* Fischer |
| pigeon | *paloma* | *Columba* sp. |
| pigeon (white wing) | | |
| | S | |
| snook | *robalo* | *Centropomus pectinatus* Poey |
| | T | |
| *tepezcuintle* | *tepezcuintle* | *Coelogenys paca* |
| tinamou (chestnut-headed) | *gallina del monte* | *Tinamus major* Gmel. |
| toucan | *curré* | *Ramphastos swainsonii* Gould |

[1] The result of the analysis of the sample of Caños Island Wild Bees Wax by the Laboratorio Químico Oficial, República de Costa Rica, was the following:

| | |
|---|---|
| Resin | 78.17% |
| Wax | 8.65% |
| Substances insoluble in ether | 13.18% |
| | 100.00% |

| | |
|---|---|
| Humidity | 3.12% |
| Ashes | 3.20% |
| Sugars | 0.00% |
| Glues | 0.00% |

*September 21, 1945*

# APPENDIX C: COMPARATIVE VOCABULARIES

THE following is a comparative vocabulary of the Boruca language of words used in this paper. The earliest vocabulary is that of Valentini, dating from 1862. This has been taken from Lehmann, 1920, vol. I, pp. 346–48. In the chart, it is listed as Valentini, 1920. The next oldest are those of Gabb and Monseñor Thiel, and are placed according to their publication dates, the first being Gabb, 1881, and the second Thiel, 1882. The second Thiel vocabulary is taken from Lehmann, 1920, vol. I, pp. 346–56, and was collected in the year 1892. It is listed as Thiel, 1920, in the chart. The following three lists are from Pittier dating from the years 1891, 1892–96, and published by the National Museum of Costa Rica in 1941. Because of this, it is listed as 1941. The last Pittier vocabulary appeared in 1908. The final column was gathered by the writer in 1945, and contains the Boruca name for the principal items mentioned in this paper. The orthography used in the 1945 column is based on the international phonetic alphabet of G. H. Camerlynck. This alphabet was accepted at the International Congress of Phonetics in 1926. The key to this spelling is given below. (Due to the difficulties involved in obtaining special phonetic characters and setting these in the typeface as used herein, certain substitutes in the phonetic alphabet have been made. It has been necessary to make two alterations from the original — the *a*'s are different from those in the Camerlynck alphabet; *ŋ* represents an alternative form of the character used by Camerlynck.)

It should be noticed that apart from the differences caused by lack of standard phonetic alphabet, the language has been slowly changing during the period of years represented by these lists, and that certain indigenous words are being replaced by hispanic forms.

## *KEY TO PHONETIC SPELLING*

*a*: Like c*a*t, h*a*t
a: *ah*, like *a* in Latin.
*e*: like M*a*y
*ɛ*: like w*e*t, but with long vocalic sound
*ə*: like mute *e* in English
*i*: like *ee* in English: sl*ee*p
*o*: like *oh* in English
*ɔ*; *œ*: like c*u*t in English
*ø*: like c*u*stom, or better, like *eu* in French, or *ö*(*oe*) in German: G*oe*the
*b*, *d*, *f*, *g*, *k*, *l*, *m*, *n*, *p*, *r*, *s*, *t*, *v*, *z*, like in English
*ŋ*: almost like *ng* in English, or like *gn* in French
ʃ: like *sh* in English
ʒ: like *G*enevieve
*w*: like *what*, but without expiration
*j*: like *y*et
*y*: like *ü* in German: Gl*ü*ck
ɥ: like *ü* in German: Gl*ü*ck

| ENGLISH | VALENTINI (1862) 1920 | GABB 1881 | THIEL 1882 | THIEL 1920 | PITTIER 1891 | PITTIER 1941 | PITTIER 1908 | STONE 1945 |
|---|---|---|---|---|---|---|---|---|
| | | | | A | | | | |
| alligator pear | | | | *bu-cra* | | *buh'-kra* | | *bu'kra* |
| *anda-riel* (rail vine) or *bejuco de hombre* (man vine) | | | | | | | | *dra'* |
| armadillo | | | | *tzóna* | | *tsón; tsu* | | *tsɔn* |
| *Arundinella* (see savannah grass – for rattles) | | | | | | | | |
| | | | | B | | | | |
| bags (string) | | | | | | | | *kre-ʃi* |
| banana | | *bridwa* | | *bri-duáh* | | *brid-uá* | | *brid'wa* |
| banana (guineo) | | | | | [1] | [2] | | *bu-dwa'* |
| bark cloth | | | | *cavac* | *cavác* | | | *kavak'* |
| basket | | | | *cooh-cráng* | *ko-kra* | *kokrán* | | *kɔ* |
| basket (large) | | | | | | | | *ha'va* |
| bean | | | | *suép; súehp* | | *soeép; sueép* | | *swɛp* |
| bee | | | | *but* | | | | *but-wawa* |
| *bejuco de fierro* (iron vine) or *bejuco negro* (black vine) | | | | | | | | *brit* |
| *bejuco de fuego* (fire vine) | | | | | | | | *brutʃ·a'* |
| *bejuco de hombre* (see *anda-riel* | | | | | | | | |
| belt, woven (for men) | | *suampka* | *sovémca* | [3]<br>*cactuh-tzit* | | *suam-ká* | | *suam-k·a'* |
| *bijagua* | | | | | | *krán-kah'* | | *swa-kra* |
| *bijagua* (black) | | | | | | | | *hwa-k·a'* |
| birds | *du-tsit* | *du-tsút* | | *du* | | *du; du tsët; pxé* | | *dɥ* |
| bushmaster | | | | | | *súg-dëban* | | *sug'-dɛban* |
| | | | | C | | | | |
| *cabuya* | | | | *chijt-ca* | | | | *ʃjt-ka* |
| cane (wild) | | [4]<br>*bah-krá* | | *bajira*<br>*suvát* | | *baq-krá* | | *bak-kra'* |

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[1] Pittier, 1891, p. 103, uses *bri duáh* for *platano guineo* and not for "banana."

[2] Pittier, 1941, p. 16, uses *bu-dua* for *platáno guineo*, and not for "banana."

[3] Thiel, in Lehmann, 1920, vol. I, p. 352, does not give the Spanish word *faja* but gives *cinturón* for the Boruca word cited above.

[4] Gabb, 1881, p. 465, does not list *caña blanca*, or "white cane." He lists *caña silvestre*, or "wild cane."

| ENGLISH | VALEN-TINI (1862) 1920 | GABB 1881 | THIEL 1882 | THIEL 1920 | PITTIER 1891 | PITTIER 1941 | PITTIER 1908 | STONE 1945 |
|---|---|---|---|---|---|---|---|---|
| *capulin* (white) | | | | | | *tëbé-kra* | | *tebɛ'kra;*<br>*tri'kwa;*<br>*krɔ'kr·ɐ* |
| *caraña* | | | | | | | *dibit-krá* | *dibit-kr·ɐ';*<br>*rɛʃva'* |
| *carbonero* | | | | | | | | *griʃin-kra'* |
| cassava (see yuca) | | | | | | | | |
| cat | | | | | | *bís* | | *bis* |
| chicha (from corn alone) | | *yi-wó;*<br>*djiuó*<br>(in Pittier, 1941, p. 55) | | *cuc-cha* | | *djë-buí; kup-txa-buí* | | *dʒɛ-bwi'* |
| chicha (mixed with ñampí) | | | | | | | | *dɥkatʃa'* |
| chicha (mixed with pejibaye) | | | | *suba-chá* | | | | *suba-tʃa'* |
| chicha (mixed with ripe or green plantain) | | | | | | *mua djë-bui* | | *mwadʒɛbwi'* |
| chicha (mixed with yuca) | | | | *ung-ca-chá* | | | | *uŋ-ka-tʃa'* |
| chicha *punsetti* | | | | | | | | *twistʃa'* |
| chicken | | | | *coró* | | *kroh'* | | *kro* |
| chocolate | | *kaó* | | *cáu-cá* | | *kaó; kaú* | | *kao* |
| *chonta* (large roots) | | | | | | | | *kanaʒira* |
| *chonta* (small roots) | | | | | | | | *mana-kra'* |
| clam | | | | | | | | *krū* |
| clam (large) | | | | | | | | *suru'* |
| clay vessel (large) | | | | *cvureh* | | | | *kvurɛ'* |
| clay vessel (*comal*) | | | | | | | | *gwam* |
| cocoa-butter | | | | | | *xik* | | *ʃik* |
| coffee | | | | | | | | *krangwa* |
| *Conostegia* | | | | | | [b] | | *kana kra'* |
| copal | | | | | | | | *ɥit-kra* |
| *cordoncillo* | | | | | | | *kuí-krá* | *kɥikʃ·ɐs* |
| corn | *ko-ep* | *kup* | | *cup* | *cuíp* | *kup* | *ru-krá* | *kœp* |
| corn (black) | | | | | *cuíp turinat* | *kup-turínát* | | *kœp-turjnat;*<br>*kœp-brjnat* |
| corn-patch | | | *crih* | *cri; cup-cac* | | *ri* | | *gri* |

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[b] *krá*, of course, means "plant" or "tree."

| ENGLISH | VALEN-TINI (1862) 1920 | GABB 1881 | THIEL 1882 | THIEL 1920 | PITTIER 1891 | PITTIER 1941 | PITTIER 1908 | STONE 1945 |
|---|---|---|---|---|---|---|---|---|
| corn (sprouted) | | | | | | | | *kus-pɔ* |
| corozo palm | | | | *tza-aguá* | | *tsa-kra* | | *tsa-kra'* |
| cotton | | | | *chebó* | *tshebú* | *txëbu-krá* | | *tʃebɔ'* |
| cotton, colored | | | | | *teri tshebú* | *terik txëbú* | | *trikʃu;*<br>*trikʃubuk* |
| coyol palm | | | | | | *gua-krá; ua-krá; u-krá* | | *kuwa-kra* |
| crab (river) | | | | *croc* | | *korók; gxú* | | *kɔrok'* |
| crayfish | | | | *suáh* | | *sëuá; seua* | | *su·ɐ'* |
| crayfish (small) | | | | | | | | *ʃu* |
| croaker | Apparently, only the Spanish name "roncador" is in use | | | | | | | |
| *Cuphea* | | | | | | | *tsú-krá* | *təʃu-kra'* |
| curassow | | | | *dibi-ram-at* | | *kuíng; kug* | | *kuuŋ'* |
| | | | | D | | | | |
| deer | *suturik* | | | *suturic* | | *su-turik* | | *suturik* |
| *disciplina* palm | | | | | | | | *ʃjt* |
| dog | *ăuj* | *aush* | | *aúf* | | *aúq, aúx*[6] | | *œf* |
| drum | | | | *quebé* | | *këbé* | | *kɛbɛ'* |
| dug-out canoe for river | | | | | | *ru-tsët* | | *rū* |
| dug-out canoe for sea (*bongo*) | | | | | | | | *rū* |
| | | | | E | | | | |
| egg (crocodile) | | | | | | [7] | | *kukup* |
| egg (hen) | | [8] | | [9] | | *kroh'-kup* | | *krokup* |
| *Elaeis* | | | | | | | | *tuskra'* |
| *espavel* | | | | | | | | *jɛmkra'* |
| | | | | F | | | | |
| fire stones | | | | | | *dji-bra-kang-i* | | *dʒibrakaŋ-i* |
| fire vine (see *bejuco de fuego*) | | | | | | | | |
| fish | *un* | *ung* | | *ung* | | *ung* | | *uŋ* |

[6] Pittier, 1941, p. 67, calls attention that the word for "dog" is *onomatopoeic.*

[7] Although "crocodile egg" is not given in any vocabulary except that of the writer, Pittier, 1941, p. 61, lists *kuh* as a crocodile; while Thiel, in Lehmann, 1920, vol. I, p. 353, gives *cuh*; or *cu.*

[8] Gabb, 1881, p. 472, gives *kup* for "egg." Neither Gabb nor Thiel make a distinction between the "egg" and a "hen's egg," as does Pittier and the writer.

[9] Thiel, in Lehmann, 1920, vol. I, p. 353, gives *i-cúp* for "egg."

| ENGLISH | VALENTINI (1862) 1920 | GABB 1881 | THIEL 1882 | THIEL 1920 | PITTIER 1891 | PITTIER 1941 | PITTIER 1908 | STONE 1945 |
|---|---|---|---|---|---|---|---|---|
| | | | | G | | | | |
| gourd (oblong) | | | | | | | | *tam* |
| gourd tree (oblong) | | | | | | *tam-krá* | | *tam-kra* |
| gourd (round) | | | | | | | | *kwa’* |
| gourd tree (round) | | *yūn-kra* | | *táng-crah* | | *kuá-krá* | | *kwa-kra* |
| grinding stone (for grain) | | [10] | | *cang* | | *dji-ab-rá* | | *kaŋ-kri’* |
| grinding stone (from graves) | | | | | | | | *kaŋ; brus* |
| gruel | | | | | | | | *ok-tʃa* |
| *guácimo* | | | | *dián-cráh* | | *dian-krá* | | *dian-kra* |
| guan, crested | | | | *dibíh* | | *dĕbi* | | *divj* |
| *guanacaste* | | | | | | *krú-krá* | | *kru’-kra* |
| *guatusa* | | *cheshť;*<br>*txext*<br>(in Pittier, 1941, p. 59) | | *chéh* | | *txeh’* | | *tətʃɛ’* |
| guava | | | *shuih-uáh* [11] | [12] | | *xuib-krá* | | *sɥi-kra* |
| | | | | H | | | | |
| hammock | | *kung* | | *cung* | | *kun* | | *kuŋ* |
| hearth stone (see stone) | | | | | | | | |
| *huiscoyol* palm | | | | | | *tsu-krá* | | *tsu-kra* |
| | | | | I | | | | |
| indigo | | | | | | | *tibi-káh* | *tibi-kra* |
| *Inga* | | | | *guróoba* | | *guarok-krá* | | *gwarɔk-kra* |
| | | | | J | | | | |
| *jaboncillo* | | | | | | | | *tʃis* |
| jar (for chicha) | | | | | | | | *dʒe-bwi’-griŋ`* |
| | | | | L | | | | |
| little stick grass | | | | | | | | *su* |
| loom | | | | | *cush ibing* | | | *tramɔbo* (hispanic root?) |

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[10] Gabb, 1881, p. 479, does not list "grinding stone," but lists the word for "stone" as *kang*.

[11] Thiel, 1882, p. 93, gives the tree as *shuih-uáh*, and the fruit as *uáh*.

[12] Thiel, in Lehmann, 1920, vol. I, p. 353, lists the fruit as *shuih-uáh*, but does not list the plant.

| ENGLISH | VALENTINI (1862) 1920 | GABB 1881 | THIEL 1882 | THIEL 1920 | PITTIER 1891 | PITTIER 1941 | PITTIER 1908 | STONE 1945 |
|---|---|---|---|---|---|---|---|---|
| | | | | M | | | | |
| macaw | | | *shóoh* | | | *xoh'* | | *ʃo* |
| *majagua* | | | | *sang-cva* | | *kro-kuá* | *krók-ua* | *kro-kwa'* |
| mango | There appears to be no indigenous name | | | | | | | |
| *maraca* | | | | | | | | *ta kup* |
| María tree | | | | | | *dúti-krá* | *dét-kri-kra* | *du'ti-kra'* |
| *mastate* (red) | | | | | | | | *drok-kavak-kra'* |
| *mastate* (white) | | | | | | | *kavák-kra* | *kavak-'kra'* |
| May tree (pink) | | | | | | *be-kra; bi-kra* | *be-kra;*<br>*bi-krá* | *be-kra* |
| May tree (white) | | | | | | | | *ʃubekra'* |
| mollusk (small) | | | | | | *surém-is* | | *suremis'* |
| monkey (red) | | *nõng* | | *nong* | | *nón* | | *nɔŋ* |
| monkey (white-faced) | | *ok* | | *oc* | | *ok* | | *ok* |
| mullet (fresh water) | Apparently there is no name in the Boruca tongue | | | | | | | |
| mushroom | | | | | | | | *ɔskwa* |
| | | | | N | | | | |
| nance | | | | *shiqu-cra* | | *xi-kra* | | *ʃi-kra* |
| *neno* (male) *nene* (female) | | | | | | | | *tubuk;*<br>*bru-r·a-mat* |
| | | | | Ñ | | | | |
| ñampí | | | | | | [13] | | *dɥ* |
| | | | | O | | | | |
| *ojoche* (fruit) | | | | | | | | *kaba-wa* |
| *ojoche* (tree) | | | | | | *kaba-krá* | | *kaba-krá* |
| *ojo de buey* | | | | | | | *koók-tsa-kúp* | *ʃit-kup* |
| orange | | | *draj shína* | | | *drah'-txí-na* | | *dra'-tʃin* |
| | | | | P | | | | |
| pacaya palm | | | | *cuh* | | *ku-krá* | | *kɥ-kra'* |
| palmilera | | | | | | *gxu-krá* | | *guʃ-kra* |
| papaya | | | | *cúh* | | *kuh'; u-krá* | | *kɥ* |

[13] Pittier, 1941, p. 65, lists this as *ñame.*

| ENGLISH | VALEN-TINI (1862) 1920 | GABB 1881 | THIEL 1882 | THIEL 1920 | PITTIER 1891 | PITTIER 1941 | PITTIER 1908 | STONE 1945 |
|---|---|---|---|---|---|---|---|---|
| parrot | | | *curij* | | | *kuriç* | | *ʃrig* |
| pejibaye | | | *subá-acra* | *subáa-cra* | | *suba-krá* | | *suba-kra’* |
| pejibaye (without thorns) | | | | | | | | *ɥ-krá* |
| pejibaye (without seeds) | | | | | | | | *ubp* |
| pejibaye (with seeds) | | | | | | | | *ɥᵏ* |
| perch | | | | | | *soót* | | *sort* |
| pestle or *mano* | | *yu-ré* | | *cang-e-qui-shuréh* | | *kang-i-uah’* | | *kaŋ-i-wa’* |
| *Philodendron* | | | | | | | | *so-kra’* |
| pig | | | | | | *cuchi* | | *kutʃi* |
| pig (peccary) | | *siní* | | [14] | | | | *sini’* |
| pig (wild boar?) | | *kra-mi-shuk* | | | | *kram-xuk;*<br>*kram-i-xuk* | | *kram-ʃuk* |
| pigeon (large) | *oog* | | | *óoc* | | *óok; óhok* | | *ɔrk* |
| pigeon (white-wing) | | | | | | *kibi-sut* | | *kibi-sut* |
| pineapple | | *bwat* | | *boat* | | *boaát* | | *bwate* |
| *pita* | | | | *ba* | | | | *ba* |
| plantain | | *mwa* | *ma (?)*[15] | | | *muá* | | *muwa* |
| *poró* | | | | [16] | | | *bru-krá* | *bru-kra’* |
| *poro-poro* | | | | | | *min-kra* | | *min-kra’* |
| posole (pemican?) | | | | | | | | *kubri’* |
| | | | | R | | | | |
| rattle (*maraca*) | | | | | | | | *t·a* |
| rice | | | | | | *su-srut* | | *susrūt* |
| royal palm | | | | | | | *o-krá* | *ɔ-kra’* |
| rubber (wild) | | | | | | | *gši-krá* | *gsi-kra’* |
| | | | | S | | | | |
| salt | | | | *quih* | | *kí* | | *kj* |
| salt (rock) | | | | | | | | *kj’-sj-ka* |
| salt (soft) | | | | | | | | *kj’-kɔg* |
| sandbox tree | | | | | | *tsu-krá* | | *tsu-kra’* |

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[14] Thiel, in Lehmann, 1920, vol. I, p. 351, gives *ziní* for *cariblanco*, which is a species of wild pig.

[15] It appears from the Bishop's vocabulary that *ma* may be considered as the word he uses for plantain; see Thiel, 1882, p. 103.

[16] Thiel, in Lehmann, 1920, vol. I, p. 355, gives *ming-crah*. This is, however, the *poro-poro*, and not the *poró*. See p. 6.

| ENGLISH | VALENTINI (1862) 1920 | GABB 1881 | THIEL 1882 | THIEL 1920 | PITTIER 1891 | PITTIER 1941 | PITTIER 1908 | STONE 1945 |
|---|---|---|---|---|---|---|---|---|
| sangritla tree | | | | | | | | *rus kra'* |
| savanna grass | | | | | | | | *bjak* |
| savanna grass (for new-born child) | | | | | | | | *trik-kra'* |
| savanna grass (for rattles) | | | | | | | | *suge-r·a'* |
| seeds (black used in rattles) | | | | | | | | *t·akra'* |
| *sem* palm | | | | | | | *sem* | *sem-kra'* |
| *Serjania* | | | | | | | | *abiv* |
| shaman | | | | | | | | *bruk-bri* |
| sieve | | | | | | | | *ʃi-bra-wa* |
| skirt (*manta*) | | *cuush-é* | | *cúushí* | *cuushé* | *kuux-é* | | *kūʃ* |
| snook | | | | | | *sióqk* | | *siok* |
| *sotacaballo* | | | | | | | *kuéh-krá*<br>*cuch-cra'*<br>(in Pitier, 1888, p. 93 see References) | *kuɛt-kra'* |
| Spanish plum | There appears to be no name in Boruca | | | | | | | |
| spindle | | | | | | | | *tun* |
| spindle whorl | | | | | | | | *tun-kup* |
| squash | | | | | | | | *ʒũŋ* |
| stilt palm (black, small roots) | | | | | | | | *mana-kra'* |
| stilt palm (black, large roots) | | | | | | | | *kanaʒira* |
| stone; hearth stone | | | | *chi-cráh* | | *djii-tan* | | *dji-tan* |
| *Strychnos* | | | | | | | | *tebɛtengw·a'* |
| sugar cane | | *bah-ye-rá* | | *budi* | | *baq-dji-ra* | *bax džiráh* | *bak-dʒi'-ra* |
| | | | | T | | | | |
| tamale of dried green plantains | | | | | | | | *tʃari-kɔ* |
| temple | | | | | *pshú-dji* | | | *pʃu-dji* |
| *tepezcuintle* | | | | *dijt* | | *biçt* | | *bikt* |
| termite grass | | | | | | | | *ʃupʃus* |
| tinamou (chestnut-headed) | | | | *ong-coró* | | *ond-kroh;*<br>*ung-kuk* | | *ɔnd-kro* |
| *tiquisque* | | | | *san* | | *sán* | *san* | *san* |
| tobacco | | *dova* | *du-á* | *duah* | | *dëuah'; duah'* | *dé-uá* | *dw·a* |

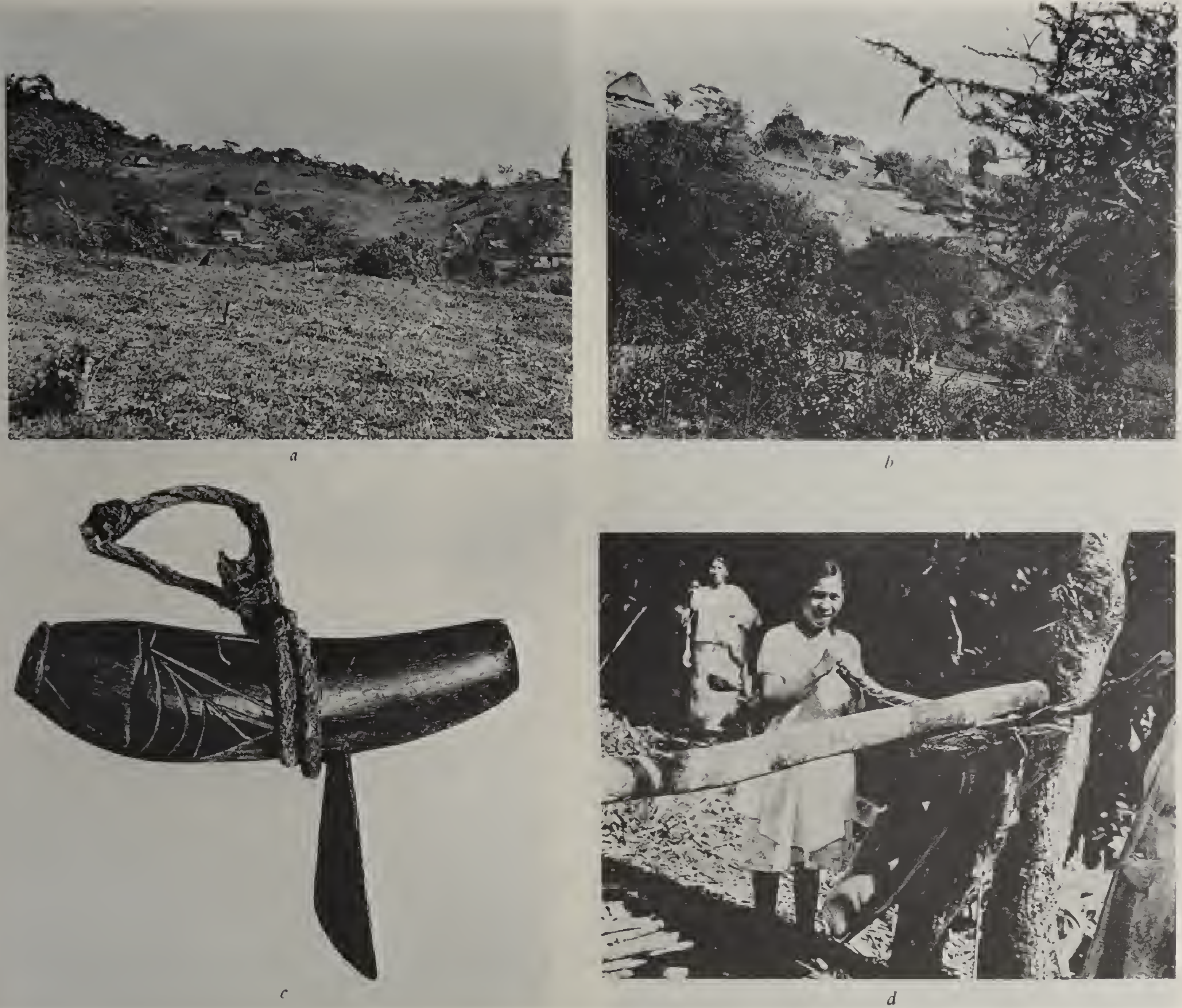
| ENGLISH | VALENTINI (1862) 1920 | GABB 1881 | THIEL 1882 | THIEL 1920 | PITTIER 1891 | PITTIER 1941 | PITTIER 1908 | 1945 |
|---|---|---|---|---|---|---|---|---|
| tortilla (of sprouted corn) | | | | | | | | *ɔ-ʃi'* |
| tortilla (of old corn) | | | | | | *o-hó-ri*;<br>*ó-txo-rí* | | *ohɔ́ -ri* |
| toucan | | | | *serit* | | *srit*; *tsi-rit-srit* | | *sirjt* |
| traps for birds | | | | | | | | *turɛka* |
| | | | | V | | | | |
| vessel (earthen) | | *kwa-lé* | | *furé* | | *surah' krueih'* | | *sũa'grih* |
| vessel (iron) | | | | | | *drik kruéih'* | | *drik-tsin* |
| | | | | W | | | | |
| wasp (wild) | | *srung-wá* | | *surúng-va* | | *srun-uá* | | *srun-wa* |
| water left from cocoa-butter | | | | | | | | *kao* |
| wax | | *but* | | *but* | | *but* | | *bœt* |
| weave used in straw *maraca* | | | | | | | | *ra-t·ɐ'* |
| weaving instruments | | | | | | | | *ra-kra* |
| witchery | | | | | | | | *mamram* |
| | | | | Y | | | | |
| yeast; also chicha with yeast | | | | | | | | *monsera*; *mohoso* (hispanic roots?) |
| yuca | | | | *úng-cah* | | [17] | | *uŋ'-ka* |
| yucca | *Itavo* is the only name used. It is probably not Boruca | | | | | | | |
| *yuquilla* | | | | | | | | *tʃama* (probably Spanish) |

[17] Pittier, 1941, p. 45, lists the sweet variety (*Esculenta* Crantz) as *únkah'*. The writer could not find this variety amongst the *Borucas*. Pittier does not list the non-sweet type.

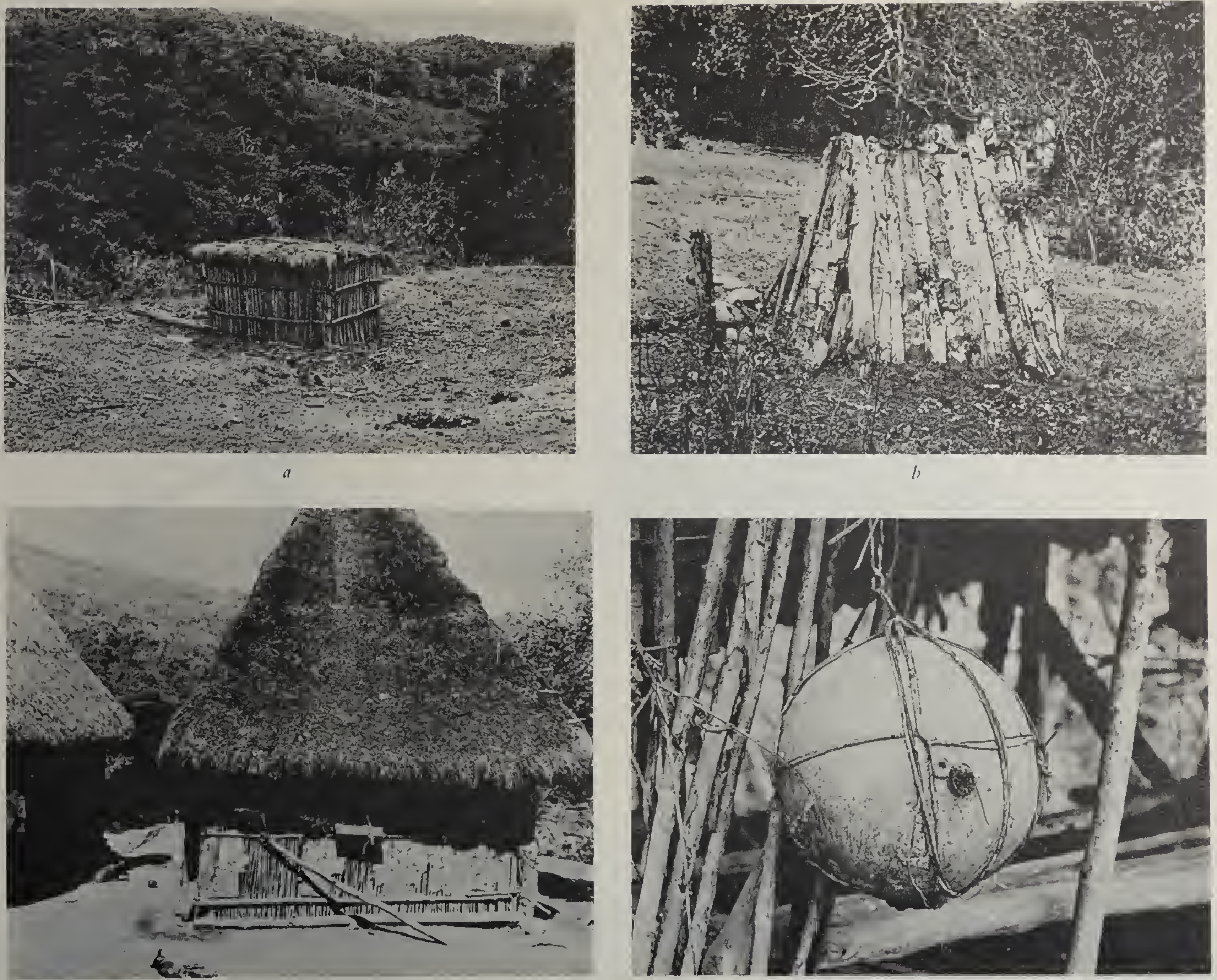
# COLLOTYPE FIGURES 3–10

**Errata:**

Throughout legends, read "pejibaye" for "pejiballe."



*a*, *b*, Distant views of Boruca village. *c*, Rice-cutter (actual size). *d*, Extraction of sugar cane juice.



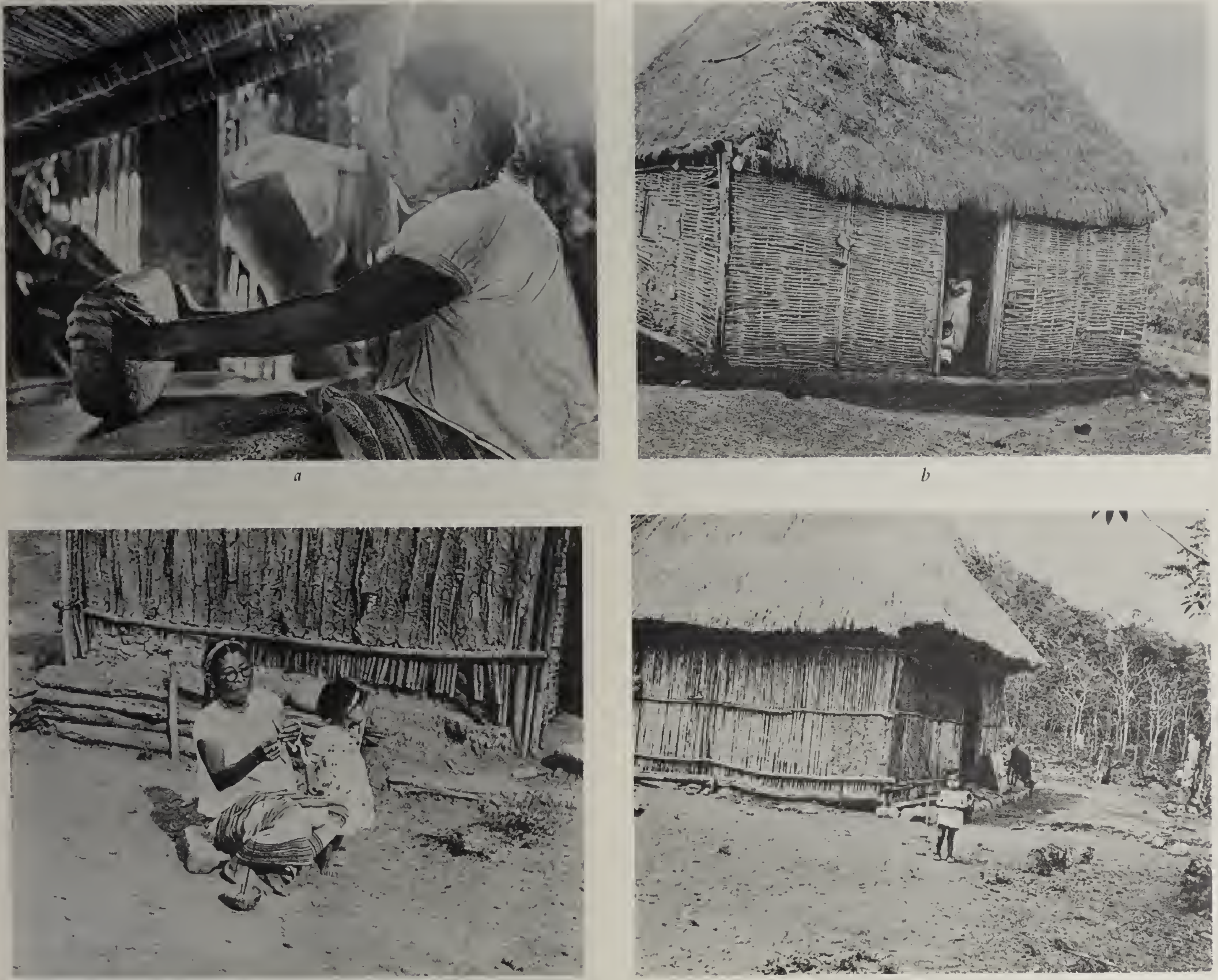
a

b

c

d

*a, b*, Two types of chicken coops. *c*, Vertical pole construction with spots of *bajareque* and hanging "nest" for setting hen. *d*, Domestication of bees (hive made from a gourd).



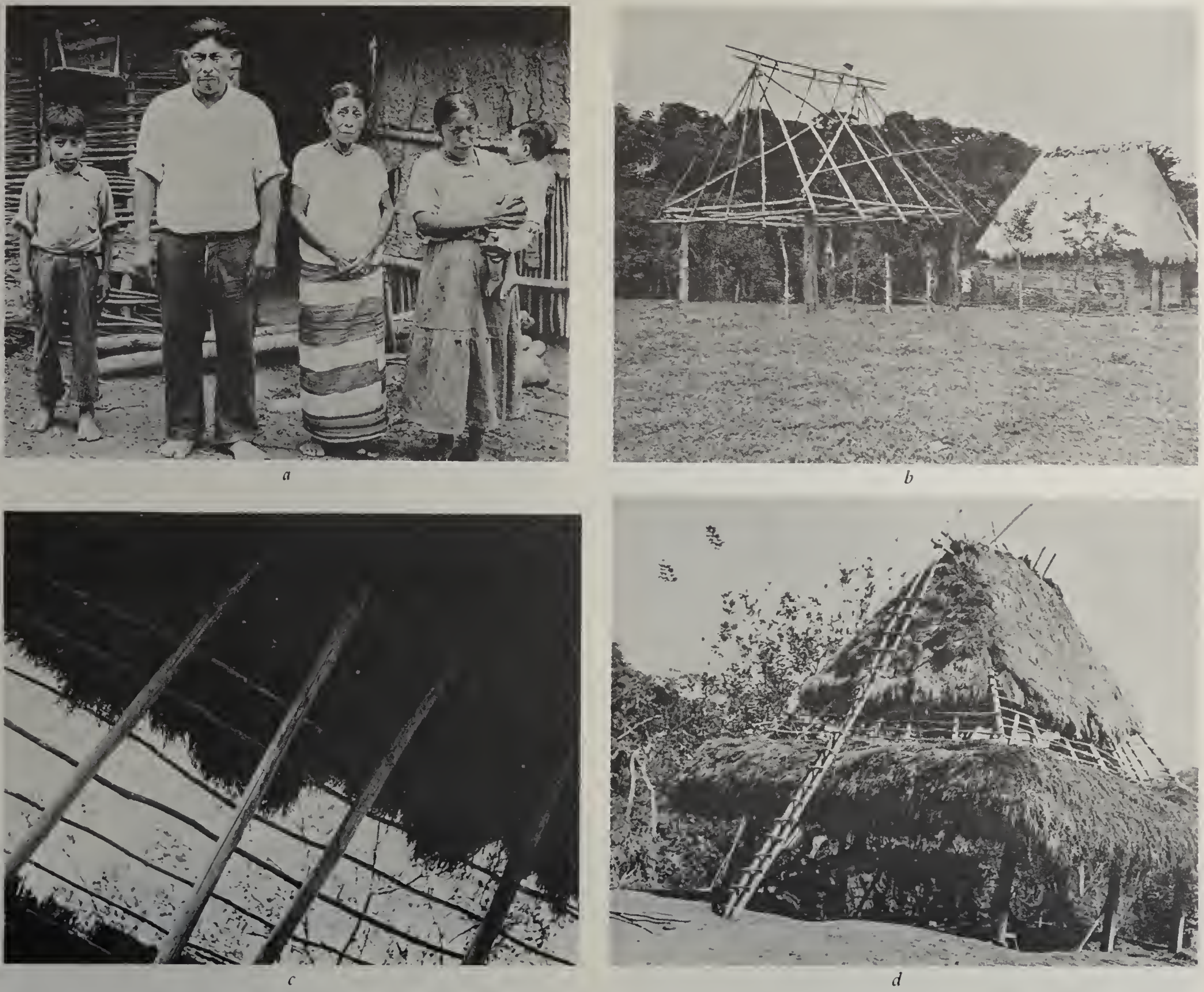
a

b

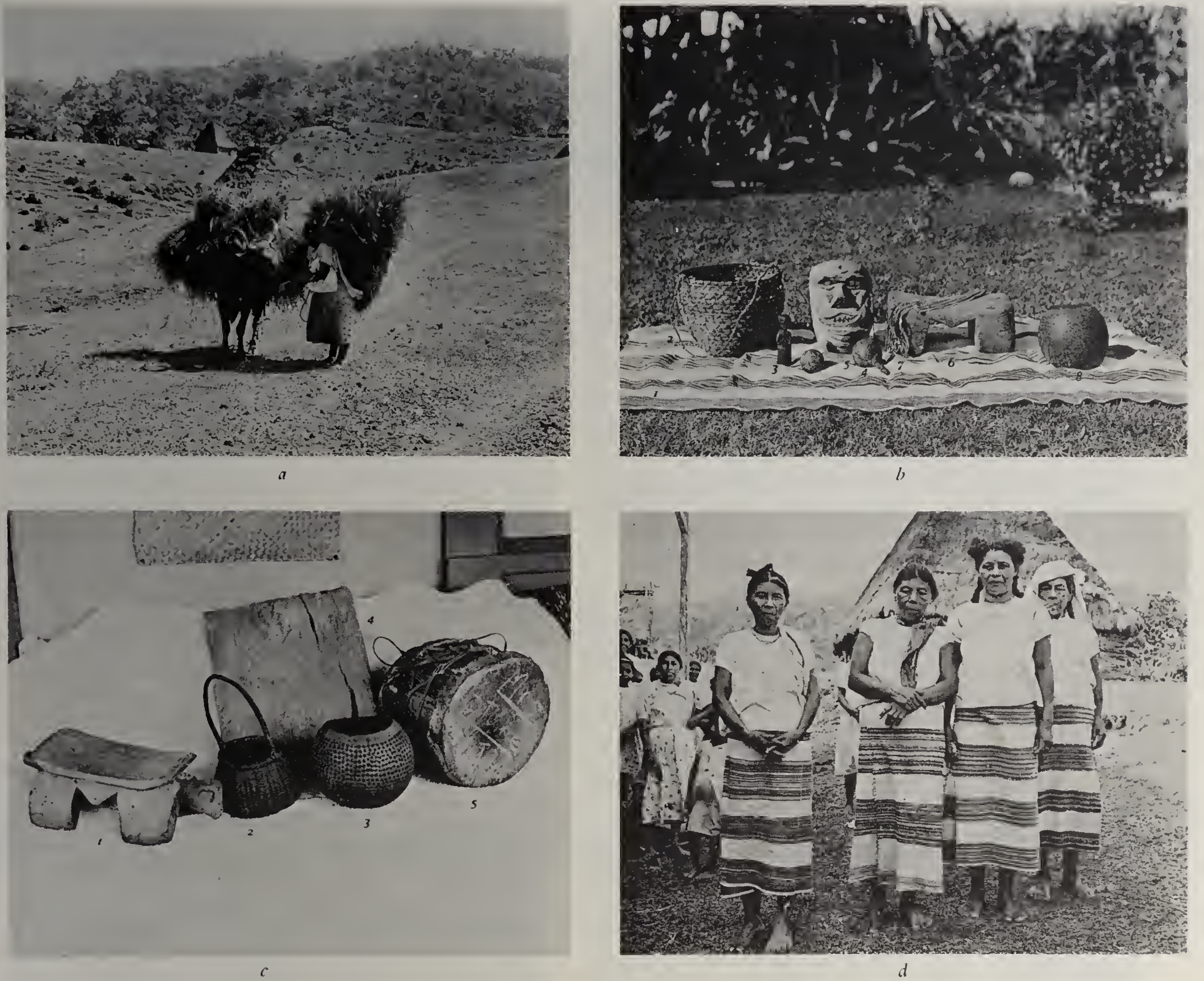
c

d

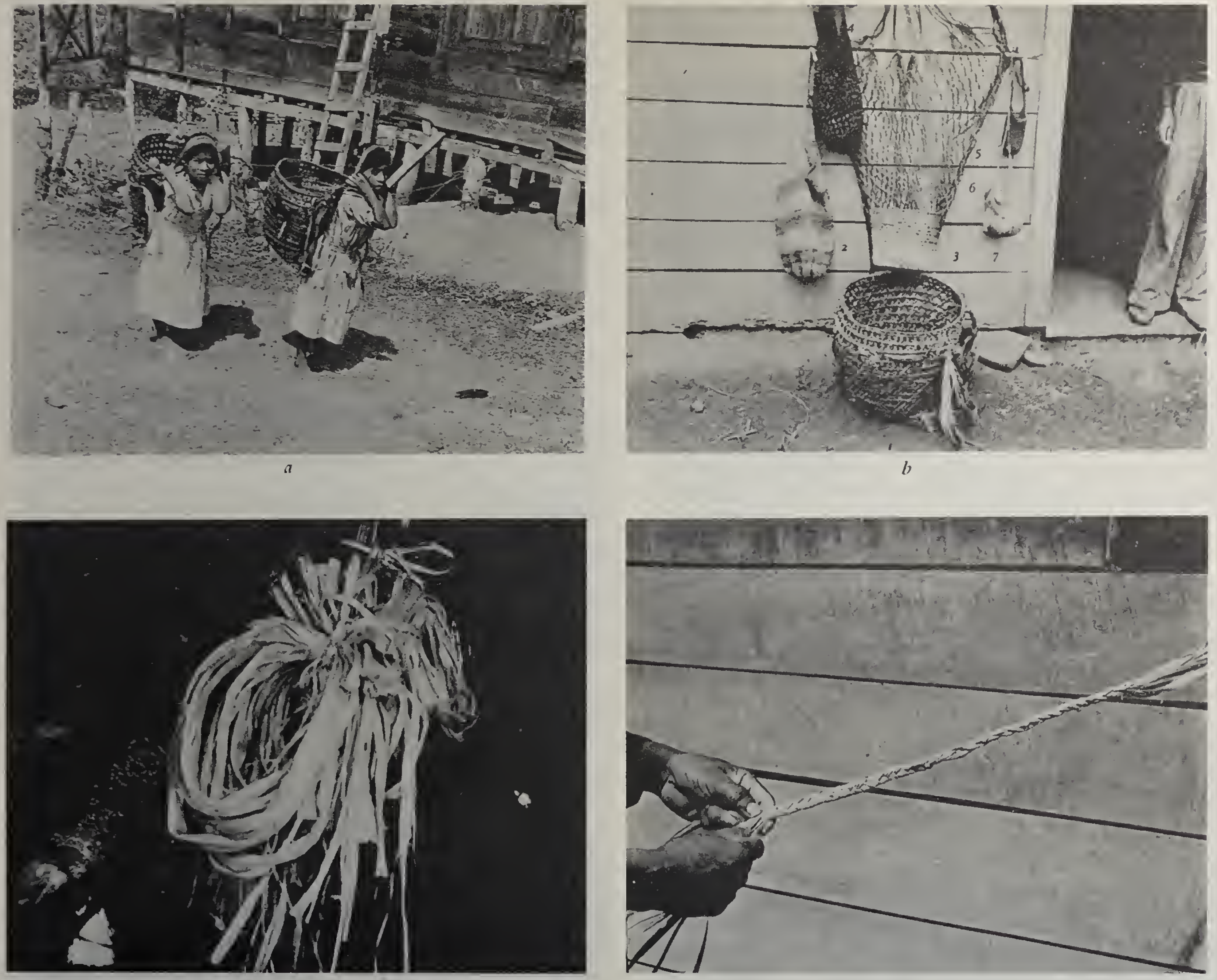
*a*, Method of grinding corn. *b*, Single pole as base of house (note window on left, and yeast for chicha hanging on front wall). *c*, House base of earth with wooden pole support (woman seated on low stool making thread). *d*, Front stone terrace, Curré.



*a*, Two types of house construction in same house. *b*, Bare framework of roof, Palmar Norte. *c*, Roof framework in more advanced stage, Boruca. *d*, Partly finished roof showing framework, grass, and ladder.

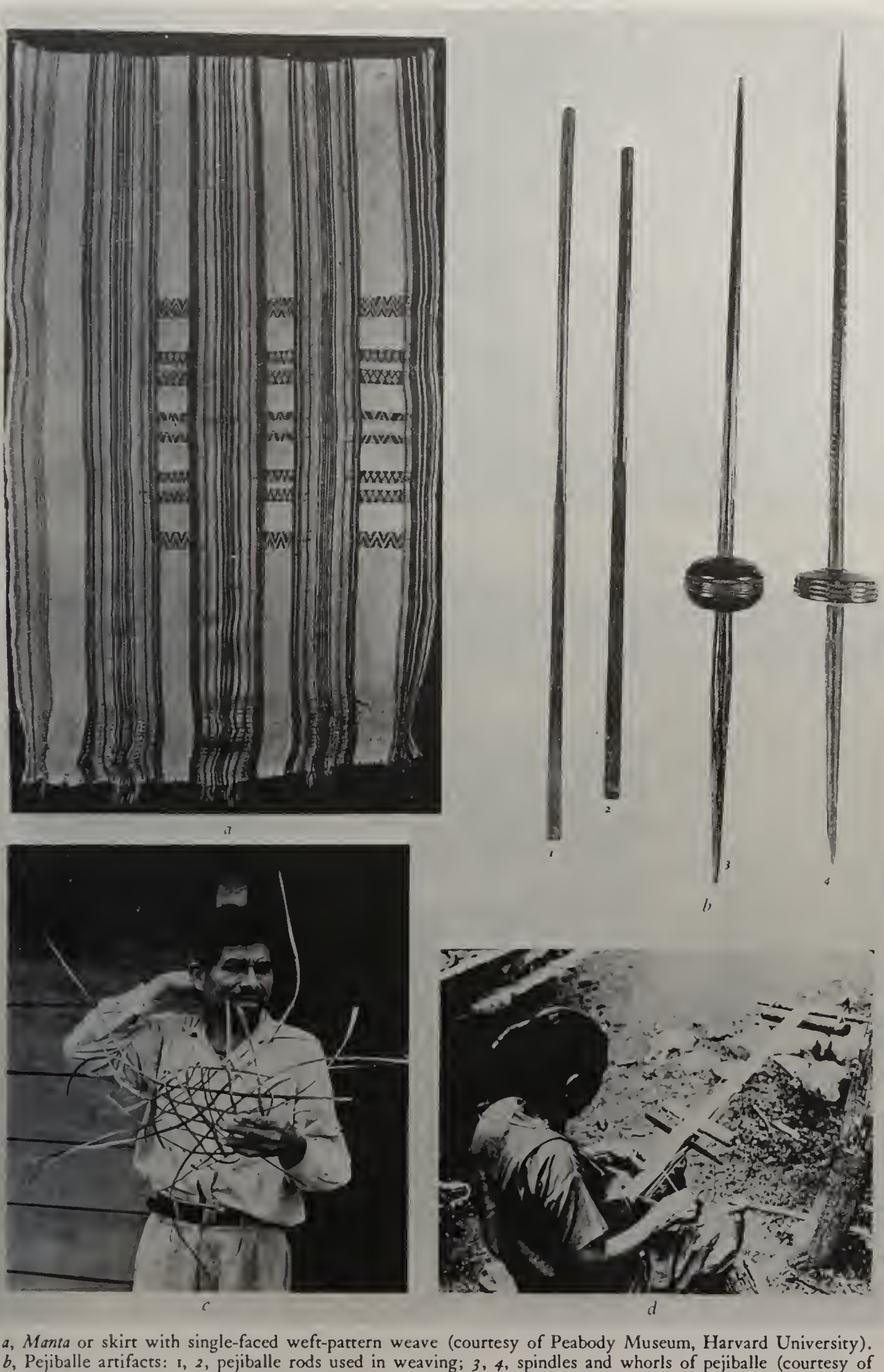


*a*, Ox and Indian woman laden with grasses for a roof. *b*, Artifacts of the *Boruca*: 1, *manta* or skirt; 2, *haba*; 3, doll; 4, *maracas* or rattles; 5, mask; 6, four-legged stool; 7, man's belt; 8, sieve. *c*, Artifacts of the *Boruca*: 1, four-legged stool with head and tail; 2, basket; 3, sieve; 4, bark cloth; 5, drum. *d* Women wearing the *manta*, or skirt, and blouse.

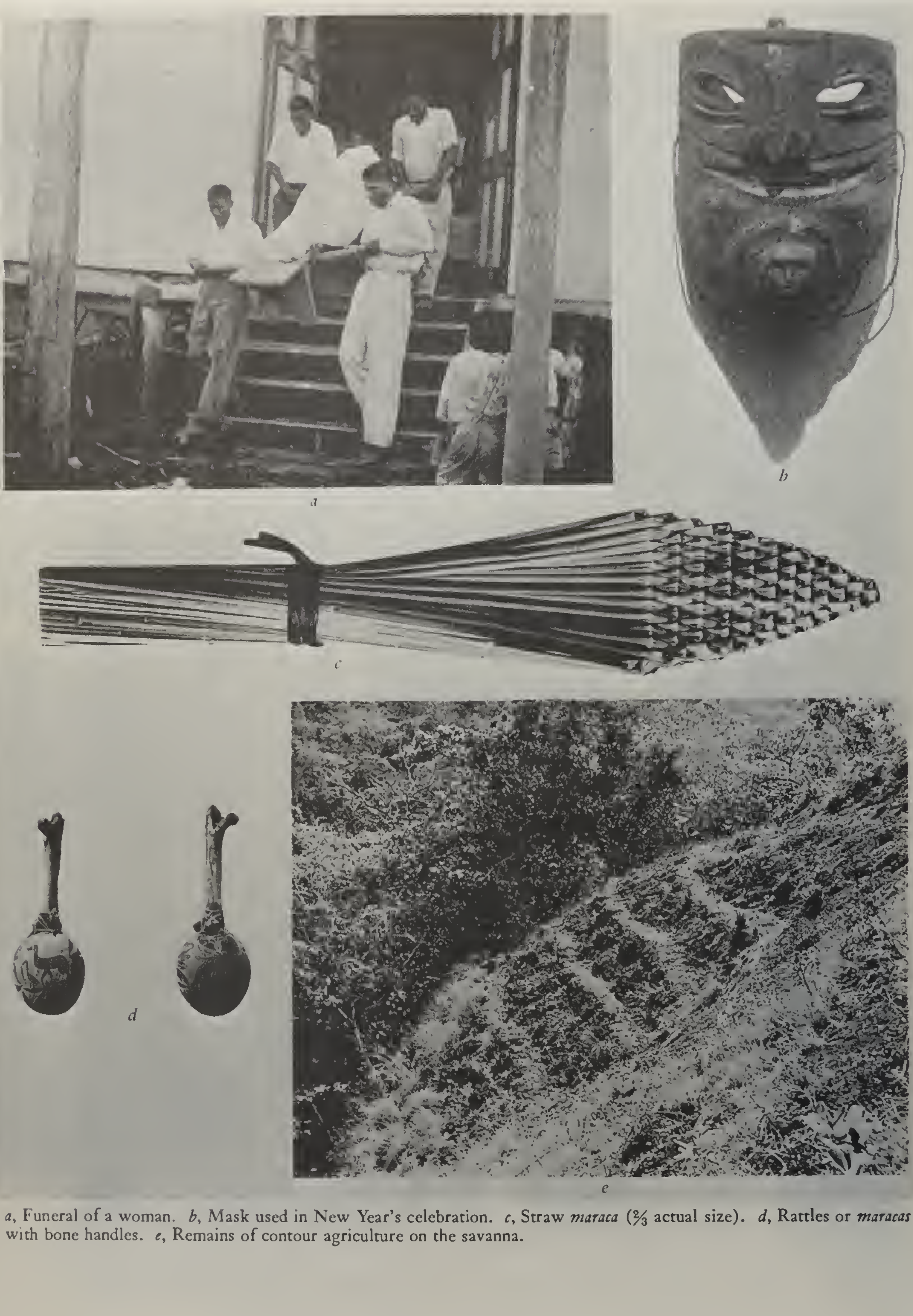


*a* *b* *c* *d*

*a*, Girls laden with oranges in *habas* in front of school house. *b*, Cordage artifacts used by the *Boruca*: 1, *haba*; 2, 4, 7, string bags made by the *Talamanca* peoples; 3, *haba*; 5, string bag made by the *Boruca*; 6, hammock made by the *Boruca*. *c*, *Majagua* ready for use. *d*, Sample of rope techniques.



*a*, *Manta* or skirt with single-faced weft-pattern weave (courtesy of Peabody Museum, Harvard University). *b*, Pejiballe artifacts: *1*, *2*, pejiballe rods used in weaving; *3*, *4*, spindles and whorls of pejiballe (courtesy of Peabody Museum, Harvard University). *c*, Start of a *haba*. *d*, Woman weaving man's belt.



*a*, Funeral of a woman. *b*, Mask used in New Year's celebration. *c*, Straw *maraca* (⅔ actual size). *d*, Rattles or *maracas* with bone handles. *e*, Remains of contour agriculture on the savanna.

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